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ABSTRACT

This curriculum guide for an occupation home economics program in food management and production services is designed for use in teaching commercial food service at the high school level. (The authors state that the guide materials are also adaptable for programs of prevocation education, vocational education for the handicapped, adult vocational education, and cooperative education). Section 1 presents an overview of the guide, giving suggestions for planning, teaching, and evaluating vocational food service programs. Also included is an explanation of the design of and suggestions for using the guide. Section 2 presents ten instructional units (concepts): (1) program orientation; (2) safety; (3) sanitation; (4) applied nutrition; (5) small equipment; (6) major equipment; (7) receiving, storing, and issuing; (8) quality food production; (9) customer service procedures; and (10), food service math. Each unit includes a statement of the relevance of the material, a list of performance competencies, suggested teacher activities, and a list of key words (trade vocabulary) related to each unit. The concluding section is a teacher reference section. Provided are suggestions for involving students, presenting information, using visual aids, evaluation, and managing the classroom. Also provided is a reference list of publications, filmstrips, and worksheets for this curriculum guide. (JH)

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CURRICULUM GUIDE
for food service instructional programs in pennsylvania

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Curriculum Guide for Food Service Instructional Programs in Pennsylvania

PREPARED AND DEVELOPED FOR:

Home Economics Education
Bureau of Vocational Education
Department of Education
1977

BY

Dr. Susan F. Weis
Project Director
Associate Professor, Home Economics Education
Division of Occupational and Vocational Studies
College of Education

Dr. Thomas F. Powers
Project Associate
Professor, Food Service and Institutional Management
Division of Man-Environment Relations
College of Human Development

Susan C. Lewis
Project Associate
Home Economics Education
Division of Occupational and Vocational Studies
College of Education

The Pennsylvania State University
University Park, Pa.

PREFACE

Curriculum Guide for Food Service Instructional Programs in Pennsylvania has been developed for the Pennsylvania Department of Education, Home Economics Education for use in vocational food service programs. It is designed for use in teaching commercial food service at the high school level. The Guide materials should be equally useful to teachers of pre-vocational education programs, vocational education for the handicapped, Home Economics cooperative education, and adult vocational education programs.

The following concepts are included: job opportunities in food service; safety; sanitation; applied nutrition; equipment for commercial food production; receiving, storing, and issuing food and supplies; food production; customer service techniques; and food service math.

The information included in this publication is presented in three sections. Section One is an overview of the Guide giving suggestions for planning, teaching, and evaluating vocational food service programs, an explanation of the design of the Guide, and suggestions for using the Guide.

Section Two includes the competencies necessary for success in food service:

Orientation introduces the student to Food Service through displays and shows the relationship of job opportunities in the Food Service industry and the students' ability to master necessary tasks.

The Safety unit stresses precautions for preventing accidents such as burns, cuts, and falls, and also includes information on procedures to follow when an emergency occurs. Along with this, throughout the Guide, the successful mastery of activities emphasizes and incorporates the safe performance of those activities.

Sanitation is an essential aspect of any food service operation. The legal implications of sanitation are explained and the importance of personal sanitation is stressed. Procedures are given for the sanitary preparation and storage of food and for sanitizing physical facilities in the food service establishment. Sanitary dish washing procedures are also detailed.

Applied Nutrition is included to provide knowledge of basic nutrition concepts needed for proper food selection. These concepts included: the essential nutrients, the four food groups and meal planning, as well as special nutrition concerns; obesity and underweight, nutrition for pregnancy, vegetarian diets, and nutrition labeling.

The ability to safely use and care for equipment for commercial food production contributes to the student's employability. Emphasis is placed on learning the correct names of tools and equipment and of the parts essential for operation. The student learns when to use the equipment, how to use it safely and correctly, how to care for it, and where to store it.

Using correct procedures in receiving, storing, and issuing food is an important part of food service. This phase of the food service operation is important in controlling operating costs.

Food Production requires knowledge of the basic factors determining quality and a variety of food production techniques.

Customer service techniques may be entirely responsible for the customer's impression of the food service establishment. Detailed procedures for preparing the table, serving guests, bussing dishes, and handling money are included. Customer relationships are explained and emphasized.

Vocational teachers live with the problem of dovetailing related studies with the speciality training they offer. One of the critical relationships is found in the interface between mathematics training and the vocational speciality training, in this case, Food Service. Because each vocational speciality requires its own set of associated mathematics competencies, there is a need for inter-disciplinary communication between the Food Service instructor and the mathematics instructor. To assemble the section entitled Food Service Math the authors of the Guide used the results of current research in determining the essential math skills needed by vocational specialities for secondary vocational education students. The basic skills are organized and presented according to their priority order for success in food service. Where applicable, remediation for skills selected as foundations of all mathematics operations are also included. For optimum benefits from this section, it is suggested that the food service instructor work with the mathematics instructor(s) to provide meaningful experiences related to mathematics for food service students.

Section Three should aid the teacher by supplying suggestions for teaching students and references for both general areas and by subject section.

ACKNOWLEDGEMENTS

Appreciation is expressed to the following persons in the Department of Education, Harrisburg, Pennsylvania:

> Ms. Carolyn Kratz, Senior Program Specialist, Home Economics Education, Bureau of Vocational Education and Dr. Carroll Curtis, Director, Research Coordinating Unit, Bureau of Vocational Education, for their encouragement and support throughout the project.

Thanks are due to Tonda Wynkoop and Paula Klosterman who provided a foundation for the development of the section on nutrition and to Ed White for his work on the food service mathematics section.

Much appreciation is due to Susan Dinger who proofread the materials, to Mary M. Cunningham for her creative graphics work, and to Mary Ann Williams for her typing services. The assistance of Penny Kuchta and Peggy Kimsey on this project is also acknowledged.

Special appreciation is due to the food service instructors in Pennsylvania who supplied helpful suggestions, and materials, as well as time and talent to this effort. Without the contribution of these individuals the project would not have succeeded. In particular, the following instructors are to be cited for their assistance:

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TABLE OF CONTENTS

Page

Preface i

Acknowledgements v

Table of Contents vi

INTRODUCTION 1
- Program Planning 6
- How to Use the Guide 8
- Contents of the Guide 9
- Definition of Terms 12
- Taxonomies of Educational Objectives 13
  - Levels of Learning 13
  - Cognitive Domain 16
  - Psychomotor Domain 17
  - Affective Domain 18

INSTRUCTIONAL MATERIALS 19
- I. Orientation 19
  - Synopsis 20
  - Performance Competencies 20
  - Laboratory Orientation 21
  - Job Opportunities in Food Service 25

- II. Safety 31
  - Synopsis 32
  - Performance Competencies 32
  - Preventative Procedures 33
  - Emergency Procedures 39

Page

III. Sanitation 43
Synopsis 45
Performance Competencies 45
Legal Aspects of Sanitation 47
Sanitation of Physical Facilities 51
Personal Sanitation 57
Sanitation in Food Handling 67
Sanitary Dishwashing 73

IV. Applied Nutrition 81
Synopsis 83

Performance Competencies 84

Essential Nutrients 85
Vitamin A 85
B Vitamins 89
Vitamin C 95
Vitamin D 99
Iron 101
Calcium 105
Water 109
Protein 113
Energy 123
Fat 129
Carbohydrates 133

Four Food Groups and Meal Planning 137
Milk Group 138
Fruit and Vegetable Group 141
Protein Group 145

Page

Four Food Groups and Meal Planning continued

Bread and Cereal Group 146
Other Foods 148
Meal Planning 149
Breakfast 149
School Lunch 151
Dinner 151
Snacks 151

EVERYDAY!! The Four Food Groups Guide 155

Special Nutritional Concerns 165
Obesity and Underweight 165
Nutrition for Pregnancy 173
Vegetarian Diets 177
Nutrition Labeling 183

Basic Nutritional Concepts 185

V. Small Equipment for Food Production 187
Synopsis 189
Performance Competencies 189
Measuring Equipment 191
Cutting Equipment 197
Pots and Pans 205
Hand Utensils 211
Serving Equipment 219
Small Cleaning Equipment 231
Linens 241
Decorating Equipment 249
Can Openers 255

Page

VI. Major Equipment for Food Production 259
    Synopsis 262
    Performance Competencies 262
    Beverage Equipment 263
    Cleaning and Disposal Equipment 273
    Mixing Equipment 283
    Surface Cooking Equipment 291
    Ovens 307
    Steaming Equipment 313
    Cold Storage Equipment 321
    Cutting Equipment 327
    Food Preparation Stations 333
    Holding and Serving Equipment 339
    Toasters 343

VII. Receiving, Storing, and Issuing 353
    Synopsis 354
    Performance Competencies 354
    Receiving, Storing, and Issuing 355
        Receiving 355
        Storage 359
        Inventory 364
        Issuing 364
    Storeroom Safety Operations 369
        Lifting Methods 371
    Food Costs and the 40 Thieves 375

13

Page

VIII. Quantity Food Production 377
- Synopsis 381
- Performance Competencies 382
- Food Preparation Terms 383
- Measuring Skills 387
- Quality Control 395
- Techniques 401
- Recipes 409
- Portioning 417
- Convenience Foods 423
- Quantity Cookery: Breads 433
- Quantity Cookery: Eggs 441
- Quantity Cookery: Cereals and Pasta 449
- Quantity Cookery: Sandwiches 455
- Quantity Cookery: Cheese 463
- Quantity Cookery: Spicing and Flavoring 467
- Quantity Cookery: Desserts 471
- Quantity Cookery: Meats, Poultry, and Seafood 485
- Quantity Cookery: Salads and Salad Dressings 495
- Quantity Cookery: Sauces, Gravies, and Soups 503
- Quantity Cookery: Vegetables and Fruits 511
- Quantity Cookery: Garnishes and Appetizers 523
- Quantity Cookery: Beverages 531

XI. Customer Service Procedures 537
- Synopsis 539
- Performance Competencies 540
- Table Preparation 541
- Meeting the Public 551
- Serving Guests 557

Page

XI. Customer Service Procedures continued

Bus Service 585
Handling Money 591

X. Food Service Math 599
Synopsis 600
Performance Competencies 601
Analysis of Number Systems and Operations 603
Measurement 623
Geometric Measurement 631
Problem Solving 633

REFERENCES 643

Suggestions for Teaching

Involving Students 645
Presenting Information 646
Using Visual Aids 647
Evaluation 648
Managing the Classroom 648

References

General References 651
Orientation 651
Safety 652
Sanitation 652
Nutrition 653
Receiving, Storing, and Issuing 655
Food Service Equipment 655
Food Production 656
Service 657
Food Service Math 658

Curriculum Guide for Food Service Instructional Programs in Pennsylvania

INTRODUCTION

This curriculum has resulted from efforts beginning in 1970 to provide an annual summer workshop for the inservice education of vocational food service teachers of food service programs. The workshops were held from 1970 to 1975, each year focusing upon a different need; such as curriculum development, individualizing instruction, teaching techniques, and evaluation. The workshops were conducted by Dr. Susan F. Weis of the Department of Home Economics Education, The Pennsylvania State University.

Simultaneously during this period, the faculty of the Food Service and Housing Administration Department at Penn State under the leadership of Dr. Thomas F. Powers, adopted a basic research aim of identifying the major forces shaping the food service industry to understand the probable direction of change in those industries. In 1973, the Research Coordinating Unit of The Pennsylvania Department of Education provided funds for a baseline study of the food service industry, 1985-90, to glean necessary information for planning vocational technical curricula at the secondary level.

Development of the curriculum actually began by looking at the realities of the Food Service world in terms of economic trends influencing the industry, a multitude of historical patterns of demographic forces and lifestyle patterns such as the processes of urbanization, suburbanization, income patterns, leisure time and work activity, and migration patterns, and the industry's internal response to these forces in terms of capital structure, firm size, market areas covered, employment patterns, and location. Other factors that were considered included current and projected trends that have nutritional implications such as the consumer movement, new cultural patterns in eating: frequent, smaller, individual mini-meals and fewer family unit meals, and greater use of fabricated substitutes for proteins and other foods. Also studied were food processing equipment, particularly concerns of energy use and transfer and food processing methods such as canning, food dehydration, frozen foods, freeze-drying, and irradiation that will effect food and the food preparation systems of the future.

Next, the future direction of the industry was studied in terms of income projections, work force, and the consumption and demand for Food Service. These were translated into a set of optimistic scenarios that explore the assumption of higher income in a relatively bouyant economy, and active government scenario focusing on two general areas of the public sector food service: the school lunch and related programs and congregate feeding for the elderly. A set of pessimistic scenarios also were developed which explore the reciprocity of less rapidly rising consumer incomes and a higher level of relative price change for food service than for prices in the economy in general.

The project resulted in a collection of research oriented essays[1] detailing the past and present status of the nation's commercial and institutional food service practices. A second volume[2] emerged one year later presenting the series of scenarios which examined the possible directions of food service industries in the next ten to fifteen years. With these successful efforts, Ms. Carolyn Kratz, Senior Program Specialist with The Pennsylvania Department of Education, Bureau of Vocational Education, and Dr. Carroll Curtis, Director of the Research Coordinating Unit of PDE, encouraged the development of a curriculum for vocational food service programs in the Commonwealth which would integrate the research base with the realities of Pennsylvania's food service industries and the vocational technical schools housing its food service programs. Ms. Susan C. Lewis, Research Assistant, developed a draft curriculum in 1975-76 working from a knowledge base of food service occupations for a project which coordinated the efforts of Dr. Weis and Dr. Powers. This was accomplished by an intensive search of the literature, industry consultations, the contributions of many vocational food service instructors at statewide meetings, and at a series of regional meetings designed for discussion of curricular details, and from visits to the programs in representative schools throughout the state.

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[1] Thomas F. Powers (ed.) The Future of Food Service: A Basis for Planning. The Pennsylvania State University, University Park, PA, 1974. (Project No. 19-4009), Pennsylvania Department of Education, Bureau of Vocational Education, Research Coordinating Unit.

[2] Thomas F. Powers (ed.) The Future of Food Service: 1985-1900. Food Service and Housing Administration, The Pennsylvania State University, University Park, PA, 1975.

After a draft of the curriculum was completed in 1976-77, another project was undertaken to field test the material. Using six schools as trial programs, the curriculum was used intensively while three other programs did not have access to the curriculum. Tests administered to all students in these nine programs indicated that the curriculum was making a positive difference. During this year, feedback from teachers using the curriculum was solicited to refine the draft curriculum materials.

The final curriculum thus emerges from a lengthy gestation. It represents the efforts of its chief writer, Susan Lewis, augmented by the contributions of many of Pennsylvania's vocational food service instructions and guided by the research base established by Dr. Powers.

Of the multitude of resource materials used, several were particularly instrumental in developing the Guide:

Danish, Steven J. and Allen L. Hauer. Helping Skills: A Basic Training Program. New York: Behavioral Publications, 1973.

Flanagan, John C., Robert F. Mager, and Willima M. Shanner. Behavioral Objectives; A Guide to Individualized Learning. Vol. 4, Mathematics. Palo Alto, California: Westinghouse Learning Press, 1971.

Guthrie, Helen A. Introductory Nutrition. Saint Louis: Mosby, 1975.

Long, Thomas E. Determination of Basic Mathematics Skill Needs and the Need for Mathematics Remediation for Secondary Vocational Education Students. University Park, Pa.: The Pennsylvania State University, 1973.

Powers, Thomas F. (Editor) *The Future of Food Service: A Basis for Planning*. University Park, Pa.: The Pennsylvania State University, 1974.

Powers, Thomas F. *The Future of Food Service: 1985 to 1990*. University Park, Pa.: The Pennsylvania State University, 1975.

Food Services: Coordinated Vocational Academic Education. Home Economics Instructional Materials Center. Lubbock, Texas: Texas Tech University, 1974.

Occupational Food Service Education. Southwest Wisconsin Technical Institute. Madison, Wisconsin: Wisconsin Department of Public Instruction and Wisconsin Board of Vocational, Technical and Adult Education: 1975.

Program Planning

Effective program planning for food service programs within a local community involves (1) understanding vocational skills needed for employment, (2) understanding human growth and development, and (3) cooperative planning.

Understanding Vocational Skills Needed for Employment. Planning and carrying out an effective program requires that the teacher understand the labor market in which students will find employment. A study of job trends, job descriptions, pay scales, and opportunities for advancement should contribute to this understanding. Such a study involves determining home economics related jobs available in the local community and nearby communities, and getting acquainted with employers and employees in these jobs. It also involves constant study to learn procedures acceptable in various job situations, skills and attitudes needed for employment, and changes taking place in the field.

Understanding Human Growth and Development. The development of the individual from birth throughout life is characterized by the occurrence of certain tasks at each stage of development. An awareness of the characteristics of youth is an important part of program planning in the food service program. Knowledge of the developmental tasks has several implications for the teacher. The tasks indicate the types of problems for which students must seek answers. The teacher must realize that individuals of the same chronological age are not necessarily in the same stage of development. In addition, a student may have special problems which must be taken into consideration. Because tasks arise at or about the same time in each student's life, however, the teacher should be able to anticipate the teachable moment and to provide learning experiences which will meet the needs, interests, and abilities of the students.

Cooperative Planning. Planning the food service program cooperatively with students, parents, administrators, employers, and others in the community should result in more effective learning and a better curriculum than would be possible in a program designed by the teacher alone. Students, parents, employers, and other community members may be included in planning through questionnaires, planning groups, interviews, and advisory committees. Cooperative planning between vocational teachers and academic teachers is necessary for a successful program. Professionally trained persons including the school principal, other homemaking teachers, teachers in other subject areas, guidance personnel, and local and area supervisors from the Department of Education also provide essential contributions to program planning. When preliminary plans have been developed, the teacher will want to discuss program planning with the students to acquire greater insight into their special needs and interests.

How to Use the Guide

This guide is presented by concepts, rather than units, to free the teacher to adapt the materials to the local situation. The teacher will need initiative, imagination, flexibility, and creativity in working cooperatively with students, parents, employers, school, and community to develop a productive program. The teacher is not expected to use all of the suggested experiences and activities with one class. A written guide cannot embody the flexibility inherent and necessary in the classroom. The teacher must adapt, supplement and expand the suggestions in view of the students' needs, interests, ability, and level of maturity. Numerous experiences enable the teacher to select the teaching-learning experiences best suited to help the student master the level of competency necessary for employment.

The Guide emphasizes ways concepts might be taught rather than include all the information the teacher will need to carry out the suggested activities. A variety of references are listed in the Reference section to aid the teacher in developing a diverse reference file.

Contents of the Guide

The following format is used for each major concept:

Concept: Ten major concepts identified as an element of the food service knowledge base are developed in this Guide. The order in which these concepts should be taught will vary considerably from one class to another depending on such things as student ability and interest, class time, projects chosen, facilities and equipment available, and the teacher's experience, interest, and ability.

Synopsis: Each major concept is introduced with a justification to explain the relevance of the material.

Subconcept: Several subconcepts are used to develop each major concept. Performance Competencies, Key Concepts, Competencies, Suggested Activities, and Trade Vocabulary are included in the development of each subconcept as follows:

Key Concept: The meaning of each subconcept is given by a summary of the ideas relating to the Competency.

Competency: Outcomes which should result from the successful completion of the Suggested Activities are first listed as Competencies at the beginning of each subconcept and also given along with the learning activity suggested for that Competency.

Suggested Activities: Suggestions are provided for learning and evaluation experiences using a variety of teaching methods and techniques. Activities should be selected to enable the students to master the competencies. Many of the Suggested Activities are experiences designed to evaluate the student's progress.

Resources: This will serve as an organizer column to (1) assist the teacher ascertain and expand the development of his or her own personal file of lesson plans, (2) select the most desirable classroom situation for a particular learning activity, and (3) develop audio-visual and bibliographic materials to enhance the learner's enjoyment of the subject. Various methods could be used to designate the presence or absence of a lesson plan for Suggested Activities. Also, classroom sessions, lab production period, and lab demonstration periods could be indicated to help the teacher plan theory and practice most advantageously.

For example:

✓	Lesson plan present in file.
-	Lesson plan absent from file.
LP	Lab production--food service laboratory work simulation in which food is produced and served to customers.
T	Theory.

L   Lab demonstration--laboratory equipment, facilities, and time is needed and used for demonstrating skills and/or concepts that cannot be adequately presented with the added responsibility of preparing and serving food to customers.

H   HERO activity--experiences best suited to a club situation.

Student interest is more easily sustained if a variety of experiences are provided for learning by seeing, hearing, feeling, and doing. Audio-visual materials help make learning enjoyable and additional information sources may whet a student's appetite to explore a newly discovered interest. Many sources for audio-visual and bibliographic materials are cited in the Reference section of the _Guide_.

Evaluation: As previously stated, many of the learning experiences in _Suggested Activities_ are designed as evaluative experiences. By selecting these activities, the teacher has many opportunities for an evaluation of student performance that does not involve reading and writing skills. Additional evaluative strategies will need to be developed by the teacher, according to the particular schools' policy and the students' abilities.

Trade Vocabulary: Including the key words related to each concept aids in building the students' vocabulary in reference to food service. Knowing these words is essential to learning the material presented.

Definition of Terms

CONCEPT--an abstraction representing the world of objects and events and a means of organizing them into categories.

COMPETENCY--the expected measurable behavior that should result from successful completion of designated learning experiences.

KEY CONCEPT--a complete thought which expresses an underlying truth, has an element of universality, and indicates a relationship to the parts or the whole of a concept.

LEARNING EXPERIENCES--purposeful activities that have meaning for students at their developmental level and result in some degree of growth toward achieving the competency.

EVALUATION EXPERIENCES--suggested activities which help determine the progress made toward mastery of competencies.

RESOURCES--teaching materials, books, pamphlets, journals, visual aids, and other instructional materials needed to carry out the suggested activities and to achieve the competencies.

HERO--Home Economics Related Occupations/Future Homemakers of America--youth organization sanctioned by the Pennsylvania Department of Education to represent the Food Service area.

TAXONOMIES OF EDUCATIONAL OBJECTIVES--a system of classifying competencies into hierarchies or levels of learning in the three domains of cognitive, affective, and psychomotor.

TAXONOMIES OF EDUCATIONAL OBJECTIVES

Levels of Learning

Recent trends in vocational education call for competency based curricula which indicate exactly what changes in behavior should be expected from students. Such competencies may be developed and arranged in order of complexity according to the taxonomies of education objectives, a system for classifying competencies.

Regardless of the recent popularity of the theory of levels of learning, it cannot be assumed that every teacher who wants to use this Guide understands this concept. The learners progression through the levels of learning is an integral part of the design of this Guide, and without a thorough understanding of the theory, one cannot hope to use the Guide easily and effectively. For these reasons, a brief explanation of the learning domains is included.

Educational objectives may be conceived of comprising three categories of behaviors. These are the cognitive domain (thinking), the affective domain (feeling), and the psychomotor domain (doing). Each domain is then divided into a hierarchy of levels from least complex to most complex. Students must reach objectives which are least complex in a domain before they are able to master more complex objectives. To reach objectives at each level, students must have mastered learning at all the levels below.

The cognitive domain deals with knowledge and information and is divided into six levels of learning: knowledge, comprehension, application, analysis, synthesis, and evaluation.[1] The hierarchal aspect of the cognitive domain is illustrated in the following example: Students must know and understand basic facts about sanitary food handling before they can apply them in preparing foods. Figure 1 provides additional details on the cognitive domain.

Levels of learning included in the psychomotor domain, the manipulative skill areas, are still being developed. One author[2] has identified possible levels in the psychomotor domain as follows: perception, set, guided response, mechanism, and complex overt response. Explanations of these suggested levels are found in Figure 2. The hierarchy in the psychomotor domain may be illustrated as follows: the teacher may demonstrate sharpening a knife while the students perceive the action. Next, the student prepares physically, mentally, and emotionally to respond. The student then imitates the teacher or follows directions. Practice is required until the student can sharpen the knife with little conscious effort. Finally, the student develops such a high degree of skill that he/she sharpens the knife automatically and with confidence.

---

[1] Benjamin S. Bloom, Taxonomy of Education Objectives, Handbook I: Cognitive Domain. New York: David McKay Company, Inc., 1956.

[2] Elizabeth J. Simpson, "Classification of Educational Objectives, Psychomotor Domain," Illinois Teacher, Vol. X, No. 4, Winter, 1966-67.

The affective domain which deals with attitudes and appreciation is divided into five levels of learning:[3] receiving, responding, valuing, organization, and characterization. These levels are explained in Figure 3. The hierarchy in this domain may be illustrated as follows: A student must be receptive and responsive to recognizing and maintaining good health before valuing good health, or allowing the desire for good health to direct his or her behavior to the point of choosing nutritious meals and snacks and trying to get plenty of rest.

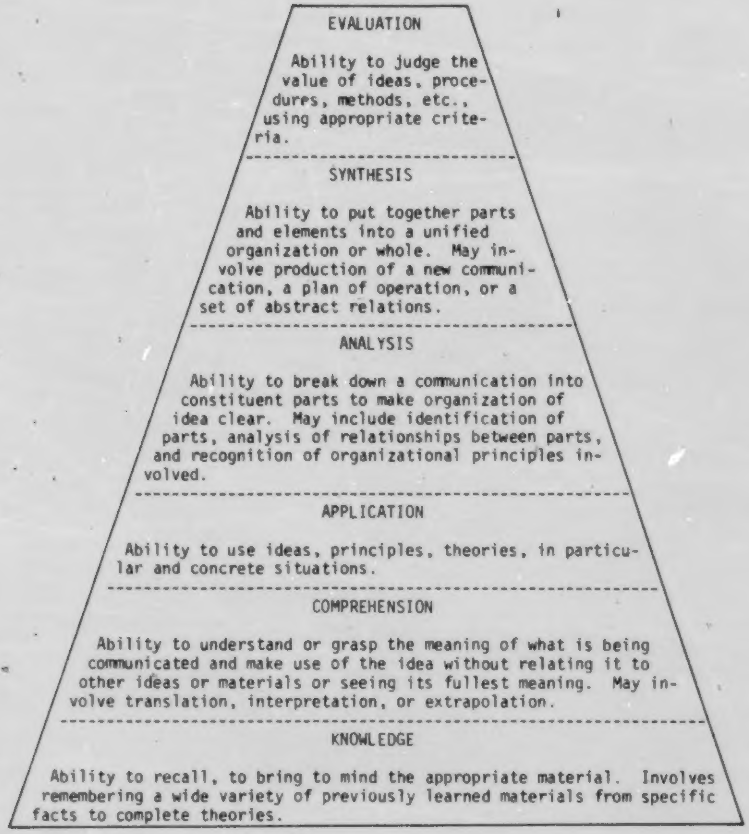
---

[3] David R. Krothwohl, Benjamin S. Bloom, and B. Masia Bertram, Taxonomy of Educational Objectives Handbook II: Affective Domain. New York: David McKay Company, Inc., 1964.

Figure 1

LEVELS OF LEARNING

Cognitive Domain[1]



EVALUATION

Ability to judge the value of ideas, procedures, methods, etc., using appropriate criteria.

SYNTHESIS

Ability to put together parts and elements into a unified organization or whole. May involve production of a new communication, a plan of operation, or a set of abstract relations.

ANALYSIS

Ability to break down a communication into constituent parts to make organization of idea clear. May include identification of parts, analysis of relationships between parts, and recognition of organizational principles involved.

APPLICATION

Ability to use ideas, principles, theories, in particular and concrete situations.

COMPREHENSION

Ability to understand or grasp the meaning of what is being communicated and make use of the idea without relating it to other ideas or materials or seeing its fullest meaning. May involve translation, interpretation, or extrapolation.

KNOWLEDGE

Ability to recall, to bring to mind the appropriate material. Involves remembering a wide variety of previously learned materials from specific facts to complete theories.

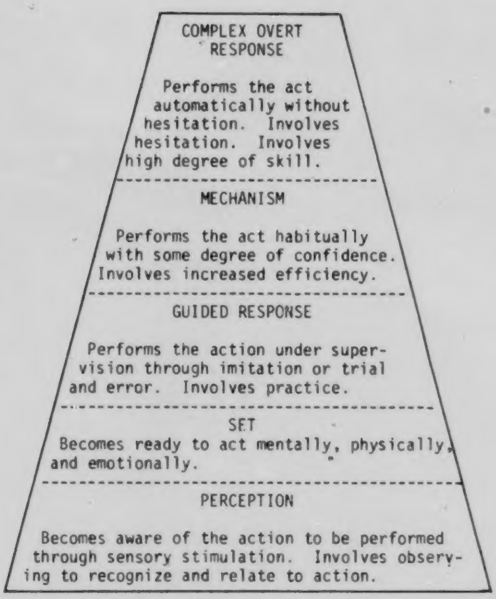
---

[1] Adapted from Bloom, Benjamin S., ed. Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay Company, Inc., 1956.

Figure 2

LEVELS OF LEARNING

Psychomotor Domain[1]



COMPLEX OVERT RESPONSE

Performs the act automatically without hesitation. Involves hesitation. Involves high degree of skill.

MECHANISM

Performs the act habitually with some degree of confidence. Involves increased efficiency.

GUIDED RESPONSE

Performs the action under supervision through imitation or trial and error. Involves practice.

SET

Becomes ready to act mentally, physically, and emotionally.

PERCEPTION

Becomes aware of the action to be performed through sensory stimulation. Involves observing to recognize and relate to action.

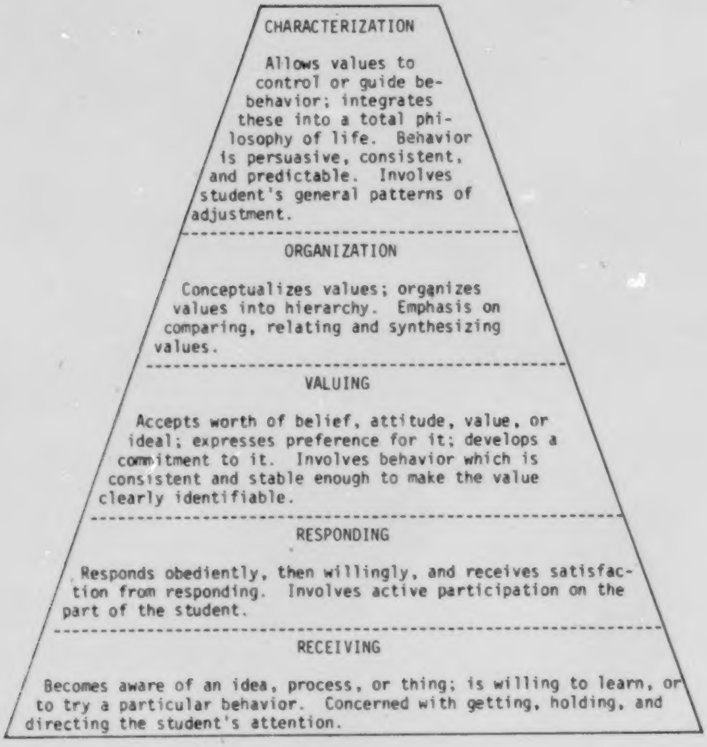
---

[1] Adapted from Simpson, Elizabeth Jane. "The Classification of Educational Objectives Psychomotor Domain," Illinois' Teacher of Home Economics, Vol. X, No. 4, Winter, 1966-67. pp. 110-144.

Figure 3

LEVELS OF LEARNING

Affective Domain[1]



CHARACTERIZATION

Allows values to control or guide behavior; integrates these into a total philosophy of life. Behavior is persuasive, consistent, and predictable. Involves student's general patterns of adjustment.

ORGANIZATION

Conceptualizes values; organizes values into hierarchy. Emphasis on comparing, relating and synthesizing values.

VALUING

Accepts worth of belief, attitude, value, or ideal; expresses preference for it; develops a commitment to it. Involves behavior which is consistent and stable enough to make the value clearly identifiable.

RESPONDING

Responds obediently, then willingly, and receives satisfaction from responding. Involves active participation on the part of the student.

RECEIVING

Becomes aware of an idea, process, or thing; is willing to learn, or to try a particular behavior. Concerned with getting, holding, and directing the student's attention.

---

[1] Adapted from Krathwohl, David R.; Bloom, Benjamin S.; and Masia, Bertram B., *Taxonomy of Educational Objectives, Handbook II: Affective Domain*. New York: David McKay Company, Inc., 1964.

ORIENTATION

I. Orientation

Page

Synopsis 20

Performance Competencies 20

Laboratory Orientation 21
    Purposes of Food Service
    Rules and Regulations
    Trade Vocabulary

Job Opportunities in Food Service 25
    Types of Food Service Establishments
    Jobs Available in Food Service
    Duties of Specific Food Service Employees
    Trade Vocabulary

ORIENTATION

SYNOPSIS

A student who seeks employment which is suited to his/her own skill and ability needs to be aware of the variety of job opportunities available in the food service industry. Moreover, he/she should be aware of all of the tasks or duties involved in each position within the industry. To select a job which is appropriate to his/her background, a student must be familiar with the details of every possible job opening.

PERFORMANCE COMPETENCIES

The student will be able to relate the activities of the class to the requirements of the working world.

The student will be able to gather and understand all existing job information within the community.

The student will be able to explain the relationship between skills learned in food service courses and the skills required in specific jobs.

LABORATORY ORIENTATION

COMPETENCIES The student will be able to:
cite the purposes of food service.
list skills to be learned in food service.
cite class routine for food service.
identify classroom equipment and facilities for food service.
list rules to be observed in food service.
accept food service laboratory regulations.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Courses in food service help the student to acquire the fundamental skills he/she will use when employed.	Cite the purposes of food service	List the purposes of food service as outlined by the teacher. Name five purposes of food service. What is your purpose in being in food service? (The student's.)		
	List skills to be learned in food service	Watch a slide story on skills to be learned in food service. What types of laboratory experiences are carried out in food service?		
The student will become acquainted with actual job situations through food service laboratory experience.	Cite class routine for food service	Listen as teacher describes the class routine to be followed in food service. Where should you place your personal belongings when you come to class? What are you expected to bring to class? How will roll be taken? How will you determine your duties each week? How long before the end of class should you begin straightening up the room?		

LABORATORY ORIENTATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify classroom equipment and facilities for food service	Tour the food service lab to become familiar with the physical arrangement of the classroom. Use a labeled diagram of the classroom to locate equipment, storage areas, and facilities used for food service. Listen as the teacher explains the uses for each area. Where are clean aprons kept and put on? Where are dirty aprons placed? Locate the following areas: customer service area; food preparation stations, including beverage station, bakery station, and cook's station's; clean-up stations, including pot sink, dishwasher, garbage disposal; storage areas, including refrigerator, freezer, and pantry; and bathroom facilities.		
		NOTE: See Food Production: Recipes for activities to rapidly familiarize students with using the recipe file.		

LABORATORY ORIENTATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The student will follow rules which are used in food service establishments. Not only will the student form good work habits, but he/she will be more employable.	List rules to be observed in food service	Study a handout sheet on rules to be observed in food service. What safety and sanitation rules are to be observed? What procedures are to be used in checking out books? What rules apply to student conduct?		
	Accept food service laboratory regulations	Brainstorm to give reasons for specific rules observed in a food service establishment.		

TRADE VOCABULARY

food service

laboratory

skills

procedures

duties

equipment

station

preparation

JOB OPPORTUNITIES IN FOOD SERVICE

COMPETENCIES The student will be able to:

- name the types of food service establishments.
- list the characteristics of each type of food service establishment.
- describe specific types of food service establishments.
- name jobs available in food service.
- list duties of specific food service employees.
- explain duties of specific food service employees.
- list qualities needed by a food service employee.
- explain the qualities needed by food service employees.
- show personal qualities needed by food service employees.
- determine the advantages and disadvantages of jobs in food service.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Food service is one of the largest industries in the United States.	Name the types of food service establishments	Study the yellow pages in the telephone directory to identify various types of food service establishments such as restaurants, lunch counters or snack bars, drive-ins, mobile food units, cafeterias, vending machine companies, institutional food services, catering companies, and travel food services. Brainstorm to list types not in the telephone directory. Listen as the teacher describes any types not mentioned.		
	List characteristics of each type of food service establishment	Brainstorm to list characteristics of each type of food service establishment. Where is food served? How is it served? What type of atmosphere may it have?		

JOB OPPORTUNITIES IN FOOD SERVICE

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe specific types of food service establishments	Divide into small groups. Draw a card describing a type of food service establishment. Work together to develop a pantomime on that type of food service. Perform the pantomime while other groups try to guess the type of establishment portrayed. The group guessing the most correctly may have a special privilege.		
Various types of food services offer employment opportunities.	Name jobs available in food service	Study the "help wanted" ads in a large newspaper to identify jobs available in food service. List jobs available.		
		Collect pictures illustrating jobs available in food service. Use the pictures to make a bulletin board display.		
		Try to find the food service jobs available in a word puzzle.		
Each food service employee must perform specific duties.	List duties of specific food service employees	Visit a food service establishment to learn the names of positions available. Listen to descriptions of the duties of each employee.		
		Listen as recent graduates describe their jobs in food service establishments. To whom is each responsible? What are the duties of each?		

JOB OPPORTUNITIES IN FOOD SERVICE

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Listen as the instructor describes the duties to be performed by each person in the food service lab. Refer to the list of duties as needed when you are assigned specific jobs.		
	Explain duties of specific food service employees	Divide into groups of four. Write the titles of food service employees on 3 by 5 cards. Shuffle the cards. Deal each player five cards. Place remaining cards in center of table to form draw pile. Turn top card face up to start discard pile. To play, player to right of dealer places one card face up on table and describes the duties of the employee. If he does so to the satisfaction of the other players, he also discards one card from his hand. If he cannot describe the duties of the food service employee named on the card played, he must place the card back in his hand and draw another card as well. The first player to get rid of all cards in his hand wins. Continue until only one player is left. Play several rounds until most of the food service cards have been used at least once.		

JOB OPPORTUNITIES IN FOOD SERVICE

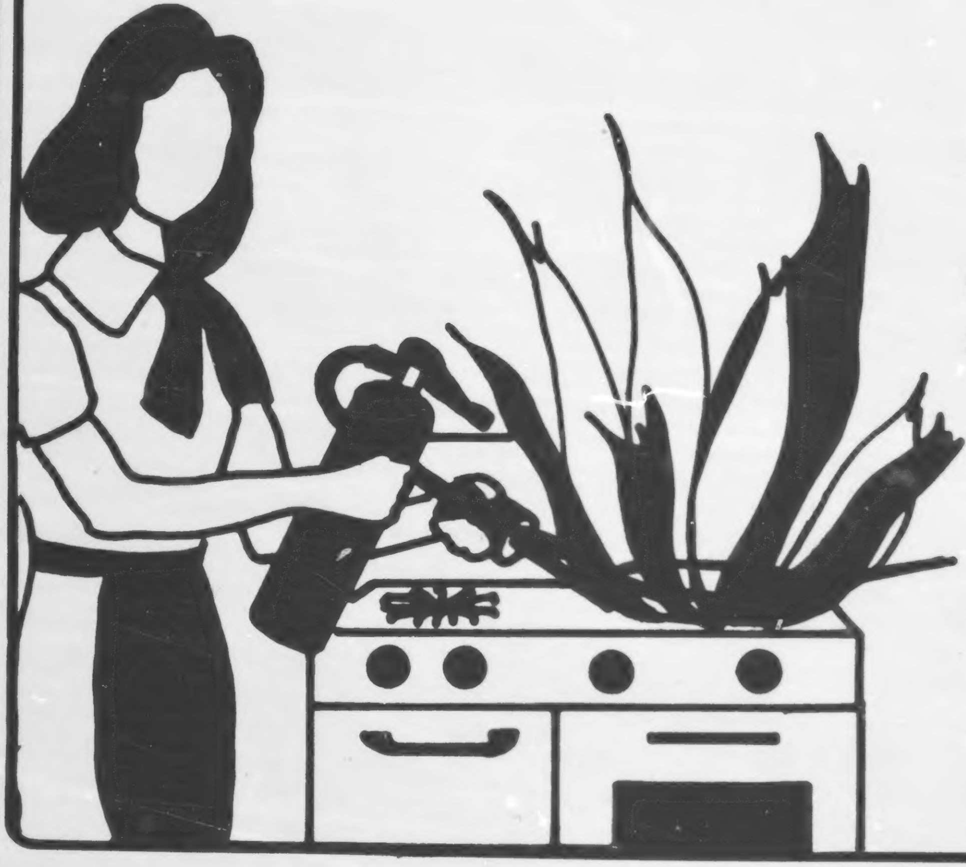
Key Concept	Competency	Suggested Activities	Resources	Evaluation
Food service managers are looking for people with certain qualities. These people are the most successful employees.	List qualities needed by a food service employee	Listen to a panel of food service employers, such as school lunchroom supervisor, restaurant manager, cafeteria manager, and drive-in manager discuss qualities they look for in employees. Brainstorm to give reasons why a food service employer might look for an employee with each of the following qualities: good attitude, dependability, cooperativeness, willingness to work, initiative, cleanliness, interest in food service, artistic ability, good health, stick-to-itiveness, and a sense of morality. (Right and Wrong)		
	Explain the qualities needed by food service employees	Listen to a description of a food service employee (emphasizing one good quality or bad quality). Discuss the quality. Is it a good or a bad quality? Why? Would an employer look for this quality? Why or why not?		
You can make employment in food service a rewarding experience.	Show personal qualities needed by food service employees	Use a checklist to rate yourself on personal qualities needed by food service employees. Try to think of ways to eliminate any poor qualities. Put your plan into action.		

JOB OPPORTUNITIES IN FOOD SERVICE

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Determine advantages and disadvantages of jobs in food service	Brainstorm to list advantages and disadvantages of food service jobs. (Advantages include compliments from clientele or management, chance to be creative. Disadvantages include working on holidays and weekends, long hours, and shift work.)		
		NOTE TO TEACHER: After finishing this section would be an appropriate time for introducing the concepts of cooperative education and your school's system in particular. Also, a career simulation game (preferably one that represents the food service industry) could be used to teach the concepts of work and give the students a familarization with the world of work in food service careers. Many excellent games are available commercially. However, before you buy, it is important that you are acutely aware of the game's view of reality. Participating in a few sessions will show you how the game depicts reality.		

TRADE VOCABULARY

restaurant
lunch counter
snack bar
drive-in
mobile food unit
cafeteria
vending machine
institutional food service
catering company
travel food service
food services manager
chef
first cook
second cook
fry- or short-order cook
vegetable cook
cook's helper
salad maker
sandwich maker
baker
baker's helper
dishwasher
potwasher
purchasing agent
maitre d'
host
hostess
head waiter
head waitress
waiter
waitress
busboy
busgirl
cashier
dietitian
cleaning and maintenance
attitude
dependable
cooperative
initiative
artistic ability



SAFETY

II. Safety

Page

Synopsis 32

Performance Competencies 32

Preventative Procedures 33
    Importance of Safety
    Types of Accidents
    Unsafe Conditions
    Unsafe Acts
    Accident Prevention Procedures and Safety Precautions
    Trade Vocabulary

Emergency Procedures 39
    Handling Specific Emergencies
    Fire
    Trade Vocabulary

SAFETY

SYNOPSIS

According to the National Safety Council 90% of all accidents occurring in commercial food service facilities are avoidable. Accidents cause people to lose their time, money, and health. Accidents are expensive to both employer and employee.

Food service employees have a good deal of responsibility: they handle thousands of dollars worth of equipment daily. If they are careless or thoughtless, they can break equipment and increase the facility's costs of operation. Management and employees must work together constantly to minimize losses caused by breakage, damage, or spoilage of property.

PERFORMANCE COMPETENCIES

The student will demonstrate the ability to perform commercial food tasks safely.

The student will apply standards of safety when working in a commercial food facility.

The student will show concern for safety in a commercial food facility.

SAFETY: PREVENTATIVE PROCEDURES

COMPETENCIES The student will be able to:
- note the importance of safety in the commercial kitchen.
- cite typical accidents and injuries in commercial food facilities.
- identify factors which lead to unsafe conditions in commercial food facilities.
- list unsafe conditions in a commercial food service establishment.
- describe unsafe conditions in a commercial food service establishment.
- identify unsafe acts occurring in a commercial food service establishment.
- depict unsafe acts occurring in a commercial food service establishment.
- identify accident prevention procedures for the commercial food facility.
- describe accident prevention procedures for the commercial food facility.
- apply accident prevention procedures in the commercial food facility.
- point out safety precautions to be observed in the commercial food facility.
- compile a checklist of safety precautions to use in the laboratory.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
There are many potential hazards in food service operations.	Note the importance of safety in the commercial kitchen	Listen to a representative of a casualty insurance company discuss the statistics of accidents in food service establishments. Discuss the cost of accidents in relation of time, money, health, etc. React to the statement "Accidents don't happen; they are caused, and can be prevented." Listen to a talk by the teacher or a government representative on OSHA (Occupational Safety and Health Act). Discuss: Why did		

SAFETY: PREVENTATIVE PROCEDURES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		OSHA come about? What regulations effect food service operations? Will/has OSHA been effective in reducing safety hazards? Why or why not? Is the law enforced? By what agency? Is it possible to justly enforce such a law? What, if any, are the political expendiencies of the situation? What are the effects of OSHA on society as a whole and the individual worker's health and well being?		
	Cite typical accidents and injuries in commercial food facilities	Make a bulletin board of clippings and pictures titled, "This could be you," showing accidents common in commercial food facilities, such as falls, collisions with persons or equipment, slips, stumbles, burns, cuts, sprains, splinters, broken bones, and bruises.		
The safety of the worker depends upon the worker's willingness to take the necessary precautions when operating equipment.	Identify factors which lead to unsafe conditions in commercial food facilities	Work in groups to identify safety hazards depicted in cartoons, such as neglect, carelessness, lack of organization, improper functioning of equipment, inappropriate clothing in dining and food preparation areas. Whose responsibility is it to prevent these hazards?		
	List unsafe conditions in a commercial food service establishment	Define an unsafe condition. Tour the food service laboratory. Can you spot any unsafe conditions? Brainstrom to identify other		

SAFETY: PREVENTATIVE PROCEDURES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		unsafe conditions that might exist in a food service establishment.		
	Describe unsafe conditions in a commercial food service establishment	Look at illustrations showing unsafe conditions. Explain why a particular condition is unsafe, and predict possible accidents that might result from the condition.		
	Identify unsafe acts occurring in a commercial food service establishment	View transparencies showing unsafe acts found in a commercial food service establishment. What is an unsafe act? Name the unsafe acts seen in the slides. Can you think of others?		
	Depict unsafe acts occurring in a commercial food service establishment	Pantomime unsafe acts, such as breaking glass, lifting heavy boxes, using equipment you do not know how to operate, "horseplaying" on the job, or wearing unsafe clothing.		
Preventative procedures can reduce the number of accidents	Identify accident prevention procedures for the commercial food facility	View films on kitchen safety. Discuss the responsibility of each employee in helping to achieve and maintain safe conditions for food preparation and service. Note the ways accidents are prevented.		

SAFETY: PREVENTATIVE PROCEDURES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe accident prevention procedures for the commercial food facility	Study illustrations of potential hazards in a commercial food facility, and give examples of ways to make the unsafe act or condition into a safe one.		
	Apply accident prevention procedures in the commercial food facility	Select a piece of equipment used or a task performed in a commercial food facility, and demonstrate the safety precautions associated with the use of the equipment or the performance of the task.		
	Point out safety precautions to be observed in the commercial food facility	Follow safe practices for the prevention of accidents, report hazards, and suggest safety precautions to reduce accidents in the commercial food service establishment.		
	Compile a checklist of safety precautions to use in the laboratory	Develop a check sheet of questions to aid in prevention of accidents. Examples: Falls: 1. Are spills cleaned up immediately? 2. Are mops and brooms put in the proper storage area after use and not left out for someone to trip over?		

SAFETY: PREVENTATIVE PROCEDURES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		3. Are stepladders sturdy and in good condition? Cuts: 1. Is broken glass promptly swept up and the small pieces picked up with a damp paper towel? 2. Are knives to be washed left on the drain board and not dropped into the sink? Burns: 1. Are dry pot holders used for lifting hot pans? 2. Are lids lifted properly from pans so that steam burns are avoided. 3. Are flames turned off when pans are removed from the range?		
		NOTE TO TEACHER: Detailed information on the safe operation of major pieces of food service equipment is included in the section entitled Major Equipment for Food Production. The safe use of hand tools, such as knives, is included in Small Equipment for Food Production under "Hand Utensils" and also "Cutting Equipment."		

TRADE VOCABULARY

safety

carelessness

accident

accident prevention

OSHA

unsafe acts

injury

unsafe conditions

safety precautions

SAFETY: EMERGENCY PROCEDURES

COMPETENCIES The student will be able to:

- identify procedures for handling specific emergencies.
- describe procedures for handling specific emergencies.
- practice procedures for handling emergencies.
- adopt procedures for handling selected emergency situations.
- identify potential emergencies in the commercial food facility.
- name the elements of a fire.
- cite the three types of fires.
- identify the methods of handling fires.
- describe methods of extinguishing fires.
- identify other emergency situations.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Emergencies require immediate and precision handling.	Identify procedures for handling specific emergencies	Listen to a commercial food service manager describe various emergency situations and ways of handling them. Listen to a school nurse discuss handling of emergency cuts, burns, and falls. Work in groups, and list steps for handling a cut, burn, or fall. Watch a nurse demonstrate emergency first-aid treatments. Examine a first-aid kit. Note the location of the first-aid kit in the food service lab.		

SAFETY: EMERGENCY PROCEDURES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		View a film on food service emergencies. Note the procedures for handling emergency situations. To whom should the accident be reported?		
	Describe procedures for handling specific emergencies	Make posters to illustrate procedures for handling emergency situations such as cuts, burns, and falls. Display posters in the lab.		
	Practice procedures for handling emergencies	Divide into rescue teams, and practice handling simulated emergency situations such as a grease fire on the griddle or a cut finger.		
		Draw an emergency situation assignment, and pantomime the emergency situation.		
	Adopt procedures for handling selected emergency situations	Select appropriate emergency procedures in the lab when presented with an emergency situation.		
	Identify potential emergencies in the commercial food facility	Define "emergency." Brainstorm to list possible emergencies that might occur in a commercial food service facility.		

72

73

SAFETY: EMERGENCY PROCEDURES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The failure to respond properly to a fire emergency may cause the loss of or extensive damage to life, limb, or property.	Name the elements of a fire	Listen as the teacher goes over the three elements of a fire: heat, oxygen, and a combustible material. Are these elements present in a food service facility? Where?		
	Cite the three types of fires	Listen to a fireman discuss the three types of fires: rubbish, wood, or paper; oil; and electrical. Where might these types of fires occur in a food service facility?		
	Identify the methods of handling fires	Listen to the fire chief discuss the kinds of fire extinguishers used for different types of fires. Note the placement of fire extinguishers in the food service lab. Handle the fire extinguisher.		
	Describe methods of extinguishing fires	Watch and, if possible, participate in a demonstration on handling fires.		
		Draw an assignment card naming a type of fire to be extinguished. Explain the procedure for extinguishing it.		
	Identify other emergency situations	Brainstorm to identify emergency situations other than fires, such as cuts, burns, and falls.		

TRADE VOCABULARY

emergency situation

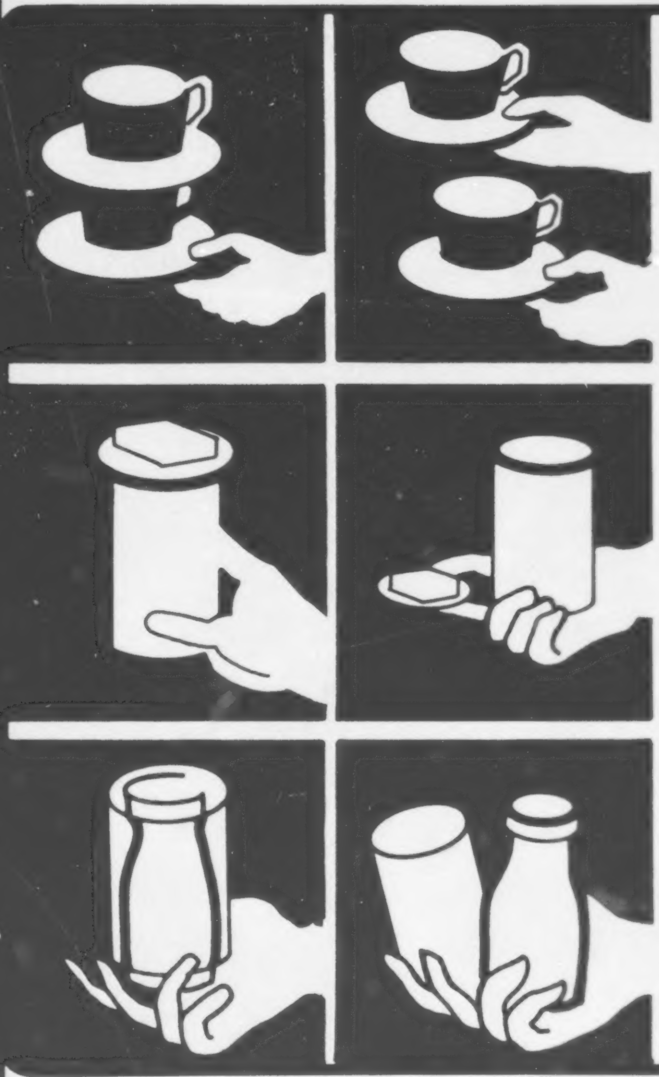
combustible material

carbon dioxide extinguishers

soda acid extinguishers

pressurized water extinguishers

dry chemical extinguishers



SANITATION

III. Sanitation

Page

Synopsis 45

Performance Competencies 45

Legal Aspects of Sanitation 47
    Definition and Importance of Sanitation in Food Service
    Legal Standards, Rules and Regulations
    Trade Vocabulary

Sanitation of Physical Facilities 51
    Standards for Sanitary Physical Facilities
    Cleaning Surfaces and Floor Care
    Trade Vocabulary

Personal Sanitation 57
    Definition and Components
    Personal Appearance
    Grooming Habits
    Pleasant Manner
    Good Conduct Rules
    Handwashing
    Trade Vocabulary

Sanitation in Food Handling 67
    Importance and Procedures
    Trade Vocabulary

Page

Sanitary Dishwashing 73
    Pre-wash Procedures
    Manual Dishwashing
    Mechanical Dishwashing
    Drying
    Handling Tableware
    Storage of Clean Tableware and Utensils
    Trade Vocabulary

SANITATION

SYNOPSIS

It is estimated that one million persons in the United States suffer from food-borne illnesses each year. Many of these illnesses could have been avoided if persons responsible for the preparation and serving of food had observed sanitary regulations.

Health service regulations and inspections make sanitary food handling imperative if a commercial food facility is to be a success. A failure to maintain health standards could result in a law suit, and the manager of a food service operation is legally liable. Therefore, the management will insist that the highest standards of sanitation are met. All employees must contribute to the maintenance of the highest sanitary practices. Employees who voluntarily and consistently observe sanitary methods are more likely to succeed in their job than those workers who do not.

PERFORMANCE COMPETENCIES

The student will apply sanitation standards in the commercial food facility.

The student will acquire skill in appropriate sanitary procedures used in commercial food service activities.

The student will show continuing desire to maintain appropriate standards of sanitation in the commercial food facility.

LEGAL ASPECTS OF SANITATION

COMPETENCIES The student will be able to:

- define sanitation
- identify sanitation laws which apply to food service facilities.
- summarize sanitation laws affecting food service facilities.
- cite the need for sanitation in the food service industry.
- explain the importance of using good sanitation practices.
- choose to adhere to legal sanitation standards.
- list procedures used to enforce food service sanitation laws.
- predict the possible legal outcome of not adhering to sanitation codes in specific situations.
- determine the degree of observance of sanitation standards in commercial food service facilities.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Numerous laws and sanitation regulations govern the operation of a commercial food facility.	Define sanitation	Brainstorm to define sanitation. Compare the class definition with the following definition of sanitation: "the science of bringing about general, healthful conditions."		
	Identify sanitation laws which apply to food service facilities	View films on sanitation to learn procedures which should be followed in food service facilities. List sanitation rules which should be observed.		
	Summarize sanitation laws affecting food service facilities	Become familiar with local laws affecting food service establishments by studying handouts obtained from the city or county department of health.		

81

82

LEGAL ASPECTS OF SANITATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The laws concerning food and food handlers protect public health and safety.	Cite the need for sanitation in the food service industry	Collect newspaper articles about food-borne illnesses and their causes. How could sanitation be a factor in each case? Who is responsible for sanitation in food service establishments?		
		Work in groups to list the areas of food service in which sanitation is important, such as personal hygiene, food handling, dishwashing, and physical facilities.		
The entire staff of a food service facility is responsible for good sanitation practices.	Explain the importance of using good sanitation practices	View a film depicting good and poor sanitation practices. Give examples of good sanitation practices. Explain why sanitation is a major concern in the food service facility.		
	Choose to adhere to legal sanitation standards	Adopt desirable sanitation practices in all laboratory work. Report to the teacher any unsanitary practices observed.		
For failure to observe sanitation regulations, the health department can close food service operations.	List procedures used to enforce food service sanitation laws	Listen to a speaker from the state, county, or city health department explain legal aspects of sanitation in food service establishments. Ask him to inspect your laboratory facilities and explain what he looks for when inspecting a food service facility.		

LEGAL ASPECTS OF SANITATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Look at a sample of an inspection report for food service establishments (obtainable from State Department of Health). What does an inspector check when he inspects a food service facility? Why does he check each of these things? Listen as the teacher or a government representative discusses how OSHA (Occupational Health and Safety Act) relates to sanitation in food service establishments.		
	Predict the possible legal outcome of not adhering to sanitation codes in specific situations	Discuss what might happen if students did not follow health rules in the food service laboratory. What would happen if an employee failed to follow health rules on the job?		
	Determine the degree of observance of sanitation standards in commercial food service facilities	Inspect the food service laboratory using a list of sanitation standards. How can sanitary practices in your food service laboratory be improved? Make plans for improving sanitary practices in the food service laboratory, if needed.		

TRADE VOCABULARY

sanitation

food handling

clean

enforced rules

City or County Department of Health

healthful conditions

dishwashing

legal aspect

State Department of Health

personal hygiene

physical facilities

inspect

approved

SANITATION OF PHYSICAL FACILITIES

COMPETENCIES The student will be able to:

cite the necessity of sanitary physical facilities.
describe sanitary standards for physical facilities.
list the steps in cleaning furniture surfaces.
explain steps in cleaning furniture surfaces.
demonstrate the steps in cleaning furniture surfaces.
carry out appropriate standards in the care of furniture surfaces.
name the steps in cleaning specific surfaces in a food service establishment.
give examples of cleaning procedures for specific surfaces.
demonstrate the steps for cleaning specific surfaces in a food service establishment.
follow appropriate procedures for floor care in a commercial food establishment.
show continuing desire to maintain sanitary commercial food service facilities.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The individual employee must assume responsibility for the work area and keep the facility clean and orderly.	Cite the necessity of sanitary physical facilities	Watch skits showing situations in which customers enter food service establishments which are clean or dirty. What can happen if the furnishings are not clean? Does this make customers want to return? Why is it important to have clean facilities in a food service establishment? View films or filmstrips showing sanitation of equipment and facilities. List methods and devices used to keep food service equipment sanitary. Why is it important for food service facilities to be clean?		

SANITATION OF PHYSICAL FACILITIES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe sanitary standards for physical facilities	Work in groups to determine the purpose of cleaning and to set up standards for cleaning the food service laboratory. Share your standards with the class.		
	List the steps in cleaning furniture surfaces	Watch a filmstrip showing procedures for cleaning counters, chairs, and table tops. What methods of cleaning are used for each? Why is sanitizing of table tops and counters necessary? How are table tops and counters sanitized? What type of cleaning is required before new customers are served? Work in groups to list the steps involved in cleaning specific food service furnishings, such as tables, chairs, and serving counters.		
	Explain steps in cleaning furniture surfaces	Look at a display of cleaning equipment and supplies. Decide which would be used for a specific job, such as cleaning a vinyl chair, a wooden table, or a formica serving counter. Look at pictures illustrating furniture surfaces which need cleaning. Decide which items in the pictures need cleaning, and describe the procedures which should be used to clean them.		

SANITATION OF PHYSICAL FACILITIES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Arrange in the correct order, cards listing the steps in cleaning a specific furniture surface.		
	Demonstrate the steps in cleaning furniture surfaces	Work with a partner to show correct procedures for cleaning tables, serving counters, and chairs.		
	Carry out appropriate standards of sanitation in the care of furniture surfaces	Practice cleaning the counter, table tops, and chairs in the food service lab. With some students playing roles of guests, rotate duties to let everyone clean each at least once.		
	Name the steps in cleaning specific surfaces in a food service establishment	Observe demonstrations on cleaning of specific surfaces. Ask a custodian to give hints on cleaning floors, windows, woodwork, doors, blinds, and furnishings. Work in groups to list the steps used for cleaning each. When are floors swept, dust mopped, wet mopped, vacuumed, or polished? How is each process done? For which floor surfaces is each most appropriate?		
		Work in groups to list the steps involved in cleaning specific areas in food service		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		facilities. Include floors, light fixtures, woodwork, blinds, walls, doors, and windows. View a filmstrip, demonstration, or transparencies showing procedures for sweeping, dust mopping, wet mopping, vacuuming, and polishing floors. List the steps involved in each. How often is each done in a food service establishment? What motion is used for each? What equipment and supplies are used for each?		
	Give examples of cleaning procedures for specific surfaces	Work with a list of floor surfaces, and indicate whether each should be swept, dust mopped, wet mopped, vacuumed, or polished. Work in pairs to explain correct cleaning procedures for various parts of a food service establishment. One partner pretends to be an experienced employee explaining to his partner, a new employee, the steps followed in cleaning various types of floors, walls, light fixtures, and windows. Switch roles. Evaluate instructions.		

SANITATION OF PHYSICAL FACILITIES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Demonstrate the steps for cleaning specific surfaces in a food service establishment	Work with a partner to show correct cleaning procedures for floors (including sweeping, dust mopping, wet mopping, vacuuming, and polishing) walls, windows, and light fixtures.		
	Follow appropriate procedures for floor care in a commercial food establishment	Work with a partner to practice sweeping, dust mopping, wet mopping, vacuuming, and polishing floors. Follow steps outlined in previous activities. Practice cleaning the facilities in the food service lab, following steps and procedures learned in previous activities.		
	Show continuing desire to maintain sanitary commercial food service facilities	Display desire to follow procedures for sanitary facilities while working in the food service laboratory.		
		NOTE TO TEACHER: If the students are using a contract to define learning responsibilities, now is a time to stress student responsibility for equipment and facility cleanliness as part of that contract.		

TRADE VOCABULARY

sanitizing

physical facilities

cleaning

PERSONAL SANITATION

COMPETENCIES The student will be able to:

define personal sanitation.
cite the importance of personal appearance.
name the main components of personal appearance.
identify grooming habits for food service workers.
describe the grooming habits of a food service worker.
prepare a checklist on good grooming habits for a good service worker.
define a pleasant manner.
describe a pleasant manner.
identify rules for good conduct.
explain good conduct rules.
cite personal habits of a food service worker that prevent the spread of disease.
illustrate personal habits of a food service worker that prevent the spread of disease.
list correct handwashing procedures.
explain the procedures for correct handwashing.
carry out correct handwashing procedures.
practice personal sanitation appropriate to a commercial food service employee.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To improve health practices, one must have a good understanding of the principles of personal health and hygiene.	Define personal sanitation	Brainstorm to define personal sanitation. Listen as teacher reads the following definition of personal sanitation: "cleanliness such as grooming habits practiced by an individual." What are grooming habits?		
	Cite the importance of personal appearance	Discuss the following statements, and tell how personal appearance enters into the situations described.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		1. An employee represents the business he works for. 2. The first contact with an employee sets the mood for the customers. 3. Personal appearance of an employee can help or hinder any good service provided by a business.		
	Name the main components of personal appearance	Brainstorm to identify the three main components of personal appearance: good grooming, pleasant manner, and good conduct. View slides depicting food service workers lacking one of the three elements of personal appearance. Identify the component which the worker is lacking.		
	Identify grooming habits for food service workers	View transparencies on the good grooming habits for a food service worker. Consider good health, including proper diet, adequate sleep, regular exercise, regular medical examinations (once a year), and regular dental checkups (at least once a year). Also consider personal cleanliness including: daily bath or shower; use of deodorant; clean teeth; odor free breath; clean, well kept hair;		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		clean manicured hands; clean under garments. Finally, consider general appearance including: clean, neat uniform; clean, low heeled shoes; clean socks or stockings without runs; appropriate hair style; only necessary jewelry (watch and wedding band); moderate use of makeup; conservative use of perfume, good posture. Why is good grooming so important? Look at a transparency of a food service worker who has not acquired the essential grooming habits. How would you react to this food service worker?		
	Describe the grooming habits of a food service worker	Model appropriate clothing and accessories for a food service worker. Have the rest of the class act as a panel of judges. Discuss changes that need to be made in the model's appearance.		
	Prepare a checklist on good grooming habits for a food service worker	Listen to a resource person such as the school nurse, a dietitian, or a food service employer discuss personal health. What procedures does he/she recommend for maintaining one's personal health? Work in groups to prepare a checklist on personal appearance. Mark the checklist every		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		week to increase awareness of good grooming habits. How can appearance affect success in getting a job?		
		Describe in your own words what is meant by good health of a food handler. Why is the food handler's breath important to the food manager? To the customer?		
	Define a pleasant manner	Listen as the teacher discusses a pleasant manner, including friendliness, courtesy, and a pleasant facial expression. What are the elements of a pleasant manner? Why should a food service worker have a pleasant manner?		
	Describe a pleasant manner	Observe a food service worker's manner. Give examples of actions or words that show pleasant manners and unpleasant manners. Describe the effect each manner has on you.		
		NOTE TO TEACHER: This is an appropriate time to introduce interpersonal skills as they relate to employee-employee relationships as well as employee-customer relations. [See IX Customer Service Procedures: "Meeting the Public."]	See "References" section for additional	

PERSONAL SANITATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Examples of interpersonal skills: 1. Using effective non-verbal behavior A. Eye contact Good eye contact consists of looking at the person you are talking to and looking at the person who is talking to you. Eye contact should be spontaneous glances which express a desire to communicate. Poor eye contact consists of never looking at the individual; staring at him/her constantly and blankly or looking away as he/she looks at you. B. Postural position (including gestures and facial expressions) Good postural includes: sitting or standing with one's body facing another person; hands occasionally being used to gesturally indicate what is being communicated verbally; being responsive facially, i.e., spontaneous smiling or nodding of head in agreement or understanding, and frowning when not understanding; an erect but not rigid body with an occasional leaning toward the other to emphasize a verbal point being made or to indicate a "withness" to the other. Poor postural position includes: standing or sitting with body not facing another	information on teaching interpersonal skills.	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		person; slouching; sitting or standing in a fixed, rigid position; being restless or fidgety; being preoccupied with hands, hair etc.; making no gestures at all with hands; constant moving or thrashing of hands and arms; no facial expression; too much inappropriate smiling, frowning, or nodding of the head. C. Verbal quality Good verbal quality includes: a pleasant, interested, intonation; speech neither too loud nor too soft; speech inflection appropriate to the message being communicated; word choice which facilitates the listener's understanding of the communication. Poor verbal quality includes: a flat, dull tone of voice, irrelevant and/or uninterested responses; speech either too loud or too soft; excessive use of jargon; excessive use of filler words as "you know." 2. Using good listening skills A. Concentrate on what the person is actually saying, not on your own feelings about that person or the particular subject. B. Don't interrupt! Wait until you are sure he/she has finished expressing their thought before you speak.		

PERSONAL SANITATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify rules for good conduct	Look at pictures showing poor conduct by a food service employee. Include gathering in the corner to gossip, running, pointing, chewing gum, smoking, never looking at guests to see if they need anything.		
	Explain good conduct rules	Role play good and poor conduct by a food service worker. Discuss the conduct portrayed. How can you improve your conduct? How will your conduct affect your customer?		
High sanitation standards are absolutely essential if a commercial food facility is to continue successful operation.	Cite personal habits of a food service worker that prevent the spread of disease	View a film on personal sanitation for food service workers. After viewing the film, participate in a round table discussion to cite hygienic practices which should be observed by food service employees. For example: observing all the elements of good grooming, especially keeping hands and fingernails clean; washing hands frequently with soap and hot water, particularly after using a hankerchief, after tying shoelaces, after visiting the restroom, and before handling food; avoiding coughing, sneezing, spitting or smoking near food or food containers; avoiding touching the hair, face, nose, and mouth; avoiding scratching skin while working, and bandaging cuts and sores; staying home when sick. Explain why each practice should be observed.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Illustrate personal habits of a food service worker that prevent the spread of disease	Make posters showing personal work habits that a food service worker should follow. Display the posters in the food service lab.		
	List correct handwashing procedures	Observe a demonstration and study handout sheet on correct handwashing. Why is correct handwashing important to a food handler? When should a food handler wash his/her hands? View transparencies showing when a food handler should wash his/her hands.		
	Explain the procedures for correct handwashing	Work in pairs to explain the correct procedure for handwashing. Later in the year make a bulletin board display showing correct handwashing procedures and occasions for observing them.		
	Carry out correct handwashing procedures	Practice correct handwashing procedures described on a handout sheet.		

PERSONAL SANITATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Practice personal sanitation appropriate to a commercial food service employee	Work in discussion groups to devise a checklist of hygienic practices a food handler should follow. Follow the checklist.		
		NOTE TO TEACHER: If the students are using a contract to define learning responsibilities, now is a time to bring attention to the student's responsibility for personal hygiene and a pleasant manner as part of that contract.		

TRADE VOCABULARY

good health

hygienic practice

personal hygiene

grooming

cleanliness

SANITATION IN FOOD HANDLING

COMPETENCIES The student will be able to:

cite the importance of sanitary and safe handling of foods.
cite the procedures for sanitary and safe handling of foods.
explain procedures for sanitary and safe handling of foods.
apply procedures for sanitary and safe handling of foods.
display sanitary and safe handling of foods.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Safe and sanitary food can be prepared if appropriate cleaning, storing, and handling methods are observed.	Cite the importance of sanitary and safe handling of foods Cite procedures for sanitary and safe handling of foods	Listen to a tape recorded interview of someone who has seen food-borne illnesses occur. What were the results of the situation? Discuss the dangerous aspects of food-borne illnesses. View films or filmstrips showing importance of safe handling of large quantities of food. View transparencies showing temperatures at which food should be stored and served. List procedures which should be observed in food service facilities to ensure sanitary handling and storing of food. How should food be served to keep it safe? Why is it important to observe safe food handling and storage procedures? In what types of containers should food be refrigerated?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain procedures for sanitary and safe handling of foods	Discuss personal experiences with food contaminated by foreign objects. Examples: hair in the soup, gum in a salad, used band-aid in the meat loaf, nail polish chips in a cream pie. How would such experiences affect a customer's attitude toward the food establishment? Describe how you would react to this type of experience, and describe possible results of each situation. How could such carelessness be prevented?		
	Apply procedures for sanitary and safe handling of foods	Conduct an experiment on the growth of bacteria. Place specimens of various foods on slides or agar plates. Store one sample of each food properly, one improperly. Periodically check each sample under a microscope to observe the growth of bacteria. What do results tell you about the proper storage of foods? About the growth of bacteria? Discuss conditions affecting the growth of bacteria. Experiment with bacteria from various sources. Take cultures from some of the following: cough, sneeze, spit, dirty hands, under fingernails, hair, can opener, garbage can, dirty floor, cockroaches, flies, or rodents. Place specimens on agar plates. Count and record		

SANITATION IN FOOD HANDLING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		the number of colonies of bacteria after 24, 48, and 72 hours. Ask the biology instructor to help identify the types of bacteria growing in the colonies. View the results of the experiment, and discuss diseases such as typhoid fever, tuberculosis, common cold, influenza, strep infections, undulant fever, infectious hepatitis, and diptheria, which are transmitted through contamination of food. Discuss the symptoms and the seriousness of each disease. View slides or pictures of the effects of each disease, or ask the school nurse to discuss them. Work in groups to prepare a skit or illustrated talk on one of the following subjects: 1. The hygienic practices of a food handler (pantomime) 2. Temperatures above or below which hazardous foods should be kept (poster) 3. Best germ spreader in food service (skit) 4. Disposal of garbage and trash (demonstration) 5. Methods of pest control (poster, talk) 6. Satisfactory handwashing (demonstration, talk)		

SANITATION IN FOOD HANDLING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Display sanitary and safe handling of foods	Exhibit sanitation procedures in the laboratory. Report to the teacher immediately if you suspect that a food might be contaminated.		

TRADE VOCABULARY

food handler

microorganisms

safe temperature

host

perishable food

potentially hazardous food

agents

bacteria

food contamination

toxin

SANITARY DISHWASHING

COMPETENCIES The student will be able to:

identify the steps in preparing dishes for washing.
describe procedures in preparing dishes for washing.
carry out pre-wash procedures.
identify the steps in manual (hand) dishwashing.
describe the procedures in manual dishwashing.
follow manual dishwashing procedures.
explain how a commercial dishwashing machine operates.
explain how using a dishwashing machine contributes to uncontaminated food.
point out the advantages and disadvantages of mechanical and manual dishwashing.
practice procedures for operating the dishwasher.
operate the dishwasher.
identify the method of drying dishes used in food service establishments.
identify procedures for handling clean tableware.
describe the procedures for correct handling of clean tableware.
carry out procedures for correct handling of clean tableware.
use correct procedures when handling clean tableware.
identify the storage areas for clean utensils.
describe the procedures for proper storage of clean dishes.
apply correct storage procedures for clean dishes.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Clean, sanitary dishes aid in making bacteria free food service possible.	Identify the steps in preparing dishes for washing	Observe a demonstration on pre-wash procedures: scraping, disposing of garbage, and pre-rinsing. What equipment is used? How is paper trash disposed of? How is garbage disposed of when a garbage disposal is not available? What is the temperature of water used for pre-rinsing?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe procedures in preparing dishes for washing	Prepare posters to illustrate scraping, disposing of garbage, and pre-rinsing. Place posters near the dishwashing area. Why are these pre-wash procedures important?		
	Carry out pre-wash procedures	Practice scraping, disposing of garbage, and pre-rinsing of dishes in lab, following directions given on the posters.		
	Identify the steps in manual (hand) dishwashing	Watch a cafeteria worker, restaurant employee or other resource person demonstrate manual dishwashing. What items are usually washed manually? What supplies are needed? What equipment is used? List steps involved in manual dishwashing. How is water temperature checked? What type of detergent is used? How is it measured?		
		Study handouts on manual dishwashing procedures.		
	Describe the procedures in manual dishwashing	Depict on a separate poster each step used in manual dishwashing. Discuss the posters, and arrange them in correct order. What water temperature is necessary to wash the dishes, to rinse the dishes, to sanitize the dishes? How is water supplied at these temperatures?		

SANITARY DISHWASHING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Display the posters near the sink where dishwashing is done.		
	Follow manual dishwashing procedures	Work in pairs to carry out manual dishwashing procedures: readying the equipment, gathering supplies, carrying out pre-wash procedures, washing, rinsing, and sanitizing.		
	Explain how a commercial dishwashing machine operates	View a film showing the operation of the commercial dishwasher. Discuss the following questions: What cycles do dishes go through in a commercial dishwasher? How are dishes racked for washing? What kind of detergent is used? How much is used? How is it measured? What sanitizing agents are used? When are they used? What quantities are used? How are they measured?		
		Listen to a commercial dishwashing equipment salesman, or a commercial dishwasher operator explain and demonstrate how the dishwasher operates.		
	Explain how using a dishwashing machine contributes to uncontaminated food	Discuss the following questions: How are dishes sanitized in a commercial dishwasher? What role does the temperature of the water play? The amount and type of detergent? The amount and type of sanitizing agent?		

SANITARY DISHWASHING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Point out the advantages and disadvantages of mechanical and manual dishwashing	Determine the differences between the two methods of washing dishes. Compare the water temperatures, the number of people involved, the time required, energy required, and effectiveness in destroying bacteria.		
	Practice procedures for operating the dishwasher	Take turns trying to operate the dishwasher, checking each step in the procedure against those observed in the demonstration. Inspect the dishes for cleanliness when they are removed from the dishwasher.		
	Operate the dishwasher	Operate the dishwashing machine in the food service lab, rotating the responsibility each class period.		
		NOTE TO TEACHER: See "Major Equipment for Food Production: Cleaning and Disposal Equipment" for additional information on operating the commercial dishwashing machine.		

SANITARY DISHWASHING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the method of drying dishes used in food service establishments	Interview several food service establishment owners or managers to determine how dishes are dried in their establishments. Why do they use these methods? Is a dish towel ever used? Why? Notice how the dishes, glassware, and silverware are dried in food service establishments you visit.		
Utensils and equipment used in preparing, serving, and storing food must be cleaned and sanitized; otherwise, these utensils will contaminate the food.	Identify procedures for handling clean tableware	Observe a demonstration on methods of carrying and handling clean items such as cups, plates, bowls, silverware, and glassware. Note which areas of the clean items are touched by the hand. View transparencies showing the correct method of handling clean dishes. Describe the correct procedure for holding various types of dishes. Examples include holding plates by the rims and never putting thumb or fingers in the center of a plate, holding cups by the handles, holding bowls by the sides, and holding glassware by or near the bottom.		

SANITARY DISHWASHING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe the procedures for correct handling of clean tableware	Volunteer to explain the procedure for handling each item of tableware as the teacher holds it up. Draw a card naming an item of tableware, and demonstrate how you would carry it to the storage area or serving station. Explain ways of transporting clean utensils to the storage area. Why are silverware and other similar equipment picked up by the handle after cleaning? Why are dishes handled only by the rim?		
	Carry out procedures for correct handling of clean tableware	Practice picking up dishes and silverware by the rims and handles.		
	Use correct procedures when handling clean tableware	Improve handling of clean dishes until correct handling becomes a habit.		
	Identify the storage areas for clean utensils	Tour the food service lab, and note the storage areas for dishes, silverware, glasses, and pots and pans.		

SANITARY DISHWASHING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Look at pictures of various storage procedures for tableware.		
	Describe the procedures for proper storage of clean dishes	Explain the correct procedures for storing tableware. (12 in. above the floor in a clean, dry place and, when practical, covered or turned upside down)? Why is all glassware stored upside down? Why should bowls be turned upside down? Why are portable, self-leveling devices preferable?		
	Apply correct storage procedures for clean dishes	Store the clean items, using the correct method and storing in the proper area. Work in pairs to check each other on proper handling of equipment.		

TRADE VOCABULARY

pre-rinse

scrape

dish detergent

water softener

sanitizing agent

spotting agent

bactericide

APPLIED NUTRITION

IV. Applied Nutrition

Page

Synopsis 83

Performance Competencies 84

Essential Nutrients
- Vitamin A 85
- B Vitamins 89
  - Thiamin, B_1
  - Riboflavin, B_2
  - Niacin, B_3
  - Pyridoxine and Folacin
- Vitamin C 95
- Vitamin D 99
- Iron 101
- Calcium 105
- Water 109
- Protein 113
  - Amino Acids
- Energy 123
  - Kilocalories
- Fat 129
- Carbohydrates 133
- Trade Vocabulary 136

Page

Four Food Groups and Meal Planning
- Milk Group 138
- Fruit and Vegetable Group 141
- Protein Group 145
- Bread and Cereal Group 146
- Other Foods 148
- Meal Planning 149
  - Breakfast
  - School Lunch
  - Dinner
  - Snacks

EVERYDAY!! The Four Food Groups Guide 155

Special Nutritional Concerns
- Obesity and Underweight 165
- Nutrition for Pregnancy 173
- Vegetarian Diets 177
- Nutrition Labeling 183

Basic Nutritional Concepts 185

NUTRITION

SYNOPSIS

Food is vital to good health. While there are many factors that can contribute to good bodily health, such as adequate rest and exercise, a good assortment of food in the proper quantities is a basic element in developing a sound body that grows and functions well and in promoting a state of general well being for people of all ages. Nutrition is the science of the relationship between the foods we eat and the health of our bodies.

Most people really like to eat. In each season of the year, a varied and abundant food supply is available, from which to choose foods that look and taste good, and provide energy and nutrients. Because foods vary in their combination of nutrients--protein, carbohydrates, fats, minerals, and vitamins--no one food, by itself, can supply all the necessary nutrients and energy. Why are food choices so important? Proper food selection is a basic requirement for healthy bodies because unless the food consumed supplies all the elements for normal life processes, the human body cannot operate at peak efficiency for very long. The well nourished individual is aware that to meet the nutritional needs of his/her body he/she must daily select foods from a wide variety of food sources.

To be nutritionally healthy, people need definite foods. Foods actually supply more than 50 individual nutrients that the body requires or uses for optimal performance. Each day we should consume foods that provide the nutrients we need. Individual foods contain different quantities of each essential nutrient. Food energy is needed by the body so that it can perform physical activity, maintain body temperature and carry out the basic processes of growth, maintenance and repair. Food energy is measured in units of calories that are derived from fats, carbohydrates, and proteins. Excess food energy is stored in the body as fat.

Each time we eat, we must decide what to eat. A wise selection of foods at meals and in between can add up to a total diet that meets individual nutrition needs, as well as personal preferences.

PERFORMANCE COMPETENCIES

The student will identify the function and source of key nutrients.

The student will explain the importance of nutrition in maintaining good health.

The student will identify the typical food sources of key nutrients.

The student will identify the daily serving requirements of teenagers for milk, meat, vegetable, fruit, and cereal foods.

The student will identify special nutritional concerns.

ESSENTIAL NUTRIENTS: VITAMIN A

COMPETENCIES The student will be able to:
identify reasons why Vitamin A is needed for a healthy body.
distinguish foods which provide Vitamin A in significant amounts.
demonstrate how food preparation techniques can minimize Vitamin A loss.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A sufficient intake of Vitamin A is necessary for a healthy body.	Identify reasons why Vitamin A is needed for a healthy body	As an introduction, view a film on, or including, Vitamin A and its role in human nutrition. Night blindness results from a low intake of Vitamin A. Have the students recall what happens to their eyes when they have (1) entered a dimly lit theatre from a brightly lit street, and (2) experienced temporary blindness after meeting a car with bright headlights at night. Poor bone growth is an initial symptom of Vitamin A deficiency. Make a poster of a normal healthy child compared to a child lacking Vitamin A. Vitamin A is needed for a healthy reproductive system. Make a poster of a family surrounded by magazine pictures of foods high in Vitamin A. Vitamin A helps a person to have nice skin. Have a student call a dermatologist and report		

ESSENTIAL NUTRIENTS: VITAMIN A

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		to the class his findings including the hazards of excess Vitamin A. Vitamin A is helpful in fighting infections. Role play Vitamin A fighting off colds, tuberculosis, and other diseases. A diet low in Vitamin A can decrease a person's taste and smell sensitivity. Provide students with clothespins or have them hold their noses while potent smelling foods are held nearby or tasted. Discuss results.		
	Distinguish foods which provide Vitamin A in significant amounts	Have students list deep yellow and dark green leafy vegetable sources of Vitamin A. Exhibit portions of foods containing equal amounts of Vitamin A. Play the "Score Game" for foods eaten by the students in the past week. Score 1 point for each 1/2 cup deep yellow or dark green leafy vegetable or fruit. Count 3 points for a serving of liver. Add 1 point if student ate milk, eggs, cheese or butter each day. Add 1 point if student ate one tablespoon of red hot chili peppers. If student gets at least		

ESSENTIAL NUTRIENTS: VITAMIN A

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		4 points, they are probably meeting recommended amounts for teenagers. Create Vitamin A containing snacks. Serve at a meeting or as an appetizer for a meal (e.g., carrots with cheese dip).		
	Demonstrate how food preparation techniques can minimize Vitamin A loss	Cook green beans in a large amount of water. Note color of water. Discuss benefits of cooking with minimal water.		

ESSENTIAL NUTRIENTS: B VITAMINS

COMPETENCIES The student will be able to:

explain why the B vitamins are necessary for a healthy body.
describe how thiamin, B_1, affects how you feel about yourself and others.
describe how riboflavin, B_2, helps you to maintain a healthy appearance and feel good about yourself.
illustrate how niacin, B_3, allows the body to release energy so that you will function at your optimum.
illustrate that pyridoxine and folacin are important for several of the more complex body processes, especially during pregnancy.
identify foods which are high in the B vitamins.
identify methods of preserving the B vitamins in the preparation of food.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A sufficient amount of the B vitamins are necessary for a healthy body.	Explain why the B vitamins are necessary for a healthy body	As an introduction, view a film or filmstrip describing the B vitamins and the role they play in human nutrition.		
	Describe how thiamin, B_1, affects how you feel about yourself and others	A B_1 deficiency is characterized by depression, loss of appetite, loss of muscle tone, and uncoordinated movement. Make a poster of a thiamine deficient person with the following characteristics: a flabby body, unhappy face, unsteady hand, and pushing away magazine cut-outs of delicious looking food. Ask the students to try and eat a sandwich immediately after finishing a large meal.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Have them record their feelings and compare to a person who has little appetite. What problems are there to feed a person who does not feel like eating?		
	Describe how riboflavin, B_2, helps you to maintain a healthy appearance and feel good about yourself	A B_2 deficiency can cause cheilosis, or inflamed lips and cracks at the corners of the mouth. Have the students draw self portraits or take polaroid snapshots if possible. Mount into two groups on a bulletin board. To one group, add swollen and cracked lips. Surround the other group of pictures with foods high in B vitamins. If riboflavin intake is not adequate, dry and scaly skin can result. Ask the students to bring in articles which symbolize this type of skin condition, e.g., snake's skin, nylon net, etc. Also have them bring in articles which symbolize nice skin, e.g., velvet, cotton, etc. Mount the examples on a poster board.		
	Illustrate how niacin, B_3, allows the body to release energy so that you will function at your optimum	A niacin deficiency is characterized by the four D's: dermatitis, diarrhea, depression, and death.		

ESSENTIAL NUTRIENTS: B VITAMINS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Draw a body on a poster. Cover the areas often affected by dermatitis with pieces of the material brought in to symbolize dry scaly skin [see riboflavin deficiency]. Add an unhappy face and show an arrow marked "Restroom" in the background.		
	Illustrate that pyridoxine and folacin are important for several of the more complex body processes, especially during pregnancy	The B vitamins play an important role during pregnancy to give the baby a better beginning in life. Make a poster of a pregnant woman happily eating foods high in B vitamins.		
		Role play "thiamine," "riboflavin," "niacin," "pyridoxine," and "folacin" with their respective abilities to help the body in various ways, e.g., "niacin" fighting off "grumpiness."		
		As an extra credit project, study other B vitamins not mentioned in class (biotin, panothenic acid, B_{12}). Present a report to the class on the functions these B vitamins play in human nutrition.		
	Identify foods which are high in the B vitamins	Display a variety of foods containing equal amounts of thiamine.		

ESSENTIAL NUTRIENTS: B VITAMINS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Make a crossword puzzle of foods high in the B vitamins. Many foods have the B vitamins added to them possibly because they have been removed in the preparation of the flour. Ask students to discover as many of these "enriched" foods in a store as possible. Make a class list. Make a mobile of foods supplying B vitamins. Prepare a meal with a "B vitamin," theme. Serve an appetizer, bread, meat, vegetable, and dessert high in B vitamins. Provide your guests with an information sheet on the vitamins. Have students labelled as "thiamin," "riboflavin," etc. Visit with the guests to show that they add interest and good feelings to people's lives. Have a B vitamin "snack contest." Vote on the best snack to serve at a party.		
	Identify methods of preserving the B vitamins in the preparation of food	Thiamin is destroyed by heat. Make a chart showing which foods are especially susceptible to high heat cooking. Suggest acceptable cooking temperatures.		

ESSENTIAL NUTRIENTS: B VITAMINS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Thiamin and riboflavin are destroyed by alkali such as baking soda. Prepare two portions of green beans. Cook one in water containing baking soda. Cook the other in water only. Note the color difference. Which is acceptable for good nutrition? Thiamin is lost when prepared in excess water. Discuss the importance of using minimal water for cooking, leaving food items to be boiled in large pieces, and not rinsing rice. Ask students to bring in labels from rice packages which give the instructions, "Do not rinse rice before cooking." Riboflavin is unstable in the presence of light. Why is it better to put milk in a cardboard container than a clear glass bottle? Niacin is extremely stable to heat, light, acid, alkali and oxidation. Make a poster containing the sun, a glowing hot stove burner, a box of baking soda and a pan of water. Mark which B vitamins should not be subjected to each illustration. Form a "rescue squad" to protect each "vitamin."		

ESSENTIAL NUTRIENTS: B VITAMINS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Form a "rescue squad" to protect "thiamin," "riboflavin," etc. from being destroyed by "heat," "light," "water," and "alkali." Role play by having a two member "rescue squad" fending off the mentioned enemies.		

ESSENTIAL NUTRIENTS: VITAMIN C

COMPETENCIES The student will be able to:

- identify reasons why Vitamin C is needed for a healthy body.
- distinguish foods which provide Vitamin C in significant amounts.
- demonstrate how the quantity of Vitamin C in food varies.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A sufficient amount of Vitamin C is necessary for a healthy body.	Identify reasons why Vitamin C is needed for a healthy body	As an introduction, view a film on, or including, Vitamin C and its role in human nutrition. Vitamin C helps to hold our bodies together by laying down collagen. Have students create cardboard and string puppets to illustrate a floppy body. Vitamin C prevents scurvy symptoms. Make a poster of an unhappy person with scurvy symptoms. Vitamin C enables the body to fight infections and help with healing. Role play "Vitamin C" fighting the common cold, tuberculosis, hay-fever, etc. Show Vitamin C helping with healing a skin burn. Vitamin C helps iron and calcium to act effectively. Have students stabilize their puppets with glue to show bone growth and energy.		

ESSENTIAL NUTRIENTS: VITAMIN C

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Place a source of Vitamin C (e.g., orange) in the puppet's hand.		
		Vitamin C makes gums and teeth healthier. Construct a mobile that is "balanced" with teeth, wrappers of chewing gum, lips, and foods containing Vitamin C.		
	Distinguish foods which provide Vitamin C in significant amounts	Exhibit portions of food containing the equivalent of Vitamin C found in a 4 oz. glass of orange juice. Create snacks high in Vitamin C. Create beverages high in Vitamin C. Serve at a meeting or for a meal.		
		Make a calendar of the days of the week with magazine pictures of foods high in Vitamin C depicted on each day.		
	Demonstrate how the quantity of Vitamin C in food varies	Make a chart of vegetables which contain more Vitamin C when ripe and vegetables which contain more when immature. Darken the parts of the vegetable which are highest in Vitamin C.		
		Call a supermarket to find out how they store fruits and vegetables to preserve vitamins.		

ESSENTIAL NUTRIENTS: VITAMIN C

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Preparation techniques help to conserve Vitamin C. Cut a potato into 20 small pieces. Cut another in half. Note the amount of surface browning. Now boil separately for 20 minutes. Note textural qualities. Discuss loss of Vitamin C from oxidation and cooking in water.		

ESSENTIAL NUTRIENTS: VITAMIN D

COMPETENCIES The student will be able to:
identify reasons why Vitamin D is needed for a healthy body.
demonstrate that Vitamin D is obtained from the sun and from foods enriched in Vitamin D.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A sufficient amount of Vitamin D is needed for a healthy body.	Identify reasons why Vitamin D is needed for a healthy body	As an introduction, view a film on, or including, Vitamin D and its function in human nutrition. Vitamin D prevents symptoms of rickets, especially bone problems. Make two stick figures, one out of heavy cardboard, the other from pipe cleaners. Contrast the two as the pipe cleaner figure gets bowed legs, knocked knees and a swollen chest. Vitamin D helps calcium to work efficiently. Locate two pieces of loaf sugar. Coat one with glue and allow to dry. Place each in a dish, label the sugar covered with glue "bones receiving calcium with the help of Vitamin D." Label the other "bones receiving only calcium." Note the hardness and relative size of the two at the end of class. Role play "Vitamin D" helping "calcium" to build a "bone" and fighting "Mr. Rickets."		

ESSENTIAL NUTRIENTS: VITAMIN D

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Demonstrate that Vitamin D is obtained from the sun and from foods enriched with Vitamin D	Make a poster depicting the following: the sun's rays trying to penetrate smog, clouds, fog, smoke, and windows to reach a boy standing in a house. The boy should have symptoms of rickets. 98% of milk in the U.S. is enriched with Vitamin D. Have several students visit a grocery store to discover other foods that have Vitamin D added. Report results to the class.		

ESSENTIAL NUTRIENTS: IRON

COMPETENCIES The student will be able to:
identify why iron is needed for a healthy body.
identify foods which provide iron in significant amounts.
demonstrate how the loss of iron in the cooking process can be prevented.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A sufficient amount of Vitamin D is needed for a healthy body.	Identify why iron is needed for a healthy body	As an introduction, view a film on, or including, iron and its role in keeping our bodies healthy. Iron helps muscles to release energy and aids in the growing process, especially during the teen years. Make a poster of a tall, healthy and happy boy whose face is the photograph of a class member. Surround the boy with foods high in iron. Iron helps to prevent anemia, especially in girls who are at a risk due to menstrual blood loss or if on a diet. Make a poster of a young girl with iron poor blood and another of a girl obtaining adequate iron. Use magazine cutouts to show the sports and activities each girl participates in considering her nutritional status. Vitamin C helps with iron absorption. Iron can then carry oxygen to the cells. Role play		

ESSENTIAL NUTRIENTS: IRON

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		"Vitamin C" helping "Iron" be absorbed. Next link "iron" to "blood" so that both can carry "oxygen" to "gasping cells." Repeat the process as it might occur in a person deficient in Vitamin C and iron. Continue until the cells die from lack of oxygen. Cut out the figure of a person from cotton cloth. Crumple this material up until it is very wrinkled. Have a student press this cloth in a class demonstration to show that "adding iron to the body will indeed straighten it out!"		
	Identify foods which provide iron in significant amounts	Display a variety of foods containing equal amounts of iron. Make a mobile of foods especially high in iron. Many food items are enriched with iron. Have the students visit stores to discover which products have iron added. Discuss the results in class. Obtaining enough iron is often difficult. Prepare original dishes which are high in		

ESSENTIAL NUTRIENTS: IRON

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Vitamin C and iron, e.g., raisin and orange slice salad. Prepare original dishes high in iron but low in calories, e.g., a fried egg on whole wheat toast, or molasses on oatmeal. Design original recipes which contain foods high in iron that teenagers do not usually like, e.g., try a spinach-cheese souffle; a peanut butter and liver sandwich. Be creative! Offer a prize for the recipe best liked by the class.		
	Demonstrate how the loss of iron in the cooking process can be prevented	Ask students to do the following class demonstrations and discuss the results. --Boil 2 potatoes, one with the skin one and one with it off. --Boil 2 potatoes, one cut into pieces and leave the other one whole. --Boil 2 portions of spinach, one in a quart of water and one in a cup of water. --Cook 2 portions of spinach, one in boiling water and the other in simmering water or by a steaming method. --Present ways of using the water in which vegetables were cooked for soups and gravies.		

ESSENTIAL NUTRIENTS: CALCIUM

COMPETENCIES The student will be able to:
identify reasons why calcium is necessary for a healthy body.
distinguish foods which provide calcium in significant amounts.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A sufficient amount of calcium is needed for a healthy body.	Identify reasons why calcium is necessary for a healthy body	As an introduction, view a film on, or including, calcium and its function in human nutrition. Calcium is necessary for bone development. Compare the pliable bones of a young frying chicken to the harder bones of a roasting chicken. Discuss the need for calcium during the "growing" years. Calcium promotes good tooth formation. Invite a local dentist to one of your meals. Ask him to briefly discuss the importance of calcium in tooth formation. Calcium helps a person to grow. Make a poster displaying a tall, healthy and happy athlete. Surround the athlete with magazine pictures of foods high in calcium. Make another poster displaying Grumpy of Snow White's Seven Dwarfs. Surround him with pictures of carbonated beverages and poor food sources of calcium.		

ESSENTIAL NUTRIENTS: CALCIUM

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Calcium aids in blood clotting. Have two students pretend they are ambulance drivers at the scene of a car accident. Two people have open leg wounds. One is calcium deficient and the other is not. How do the two wounds differ? Use ketchup for effect. Bones heal faster if a person has an adequate calcium intake. Begin a story about two boys who have broken their legs in a winter skiing accident. One is calcium deficient and the other is not. Let the students continue the storyline by telling what activities each boy is involved with in the spring. A disease in older people, osteoporosis, has been linked to a low intake of calcium for an extended period of time. Ask the students to interview their grandparents or other elderly persons to (1) compare the person's present height to his height at age 25 years, and (2) obtain information on whether they eat foods high in calcium. Discuss the results. Vitamin D helps calcium with bone deposition. Role play "calcium" and "Vitamin D" building		

ESSENTIAL NUTRIENTS: CALCIUM

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		"bones." Show "calcium" helping "teeth" and "blood clotting."		
	Distinguish foods which provide calcium in significant amounts	Display a variety of foods containing the same amount of calcium as in an 8 oz. glass of milk.		
		Daily calcium requirements can be obtained from foods other than milk. Make a mobile of calcium containing foods other than milk.		
		Several food staples are enriched with calcium. Have students visit stores to determine which products are enriched with calcium. Report results to class.		
		Prepare snacks and beverages high in calcium. Serve at a faculty meeting.		
		Vitamin D is often added to milk. Discuss why this is especially beneficial.		

ESSENTIAL NUTRIENTS: WATER

COMPETENCIES The student will be able to:
describe why water is necessary for a healthy body.
identify the water content of food, a major source of body water.
demonstrate why water is important in the preparation of food.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A sufficient amount of water is needed for a healthy body.	Describe why water is necessary for a healthy body	To introduce the idea of the importance of water to human existence and health, view a film on water and its importance to all creation. Water is a constituent of every part of the body. Sixty percent of an adult's body weight is water. Fill a quart jar with 2-1/2 cups of water to demonstrate the large amount of water in the body. Water helps the body with many processes necessary for manufacturing energy. Make a poster of a man in the desert without water. Water helps to regulate body temperature. Ask the students to write how their skin and clothes feel on a hot and sticky day. Contrast this to a day in the middle of the winter. Water lost by perspiration, breathing, and urination must be replaced daily. Make a		

ESSENTIAL NUTRIENTS: WATER

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		mobile containing six to eight glasses of water. Have the students recall how much water they drank yesterday. Was it enough? Have a student calculate how many swallows from a drinking fountain are equal to an 8 oz. glass of water. Water loss may be great during an illness or when on a fad diet. Discuss why this may be harmful. Suggest ways to remind oneself to drink enough water daily.		
	Identify the water content of food, a major source of body water	Test different foods for water. Weigh the following foods: a slice of bread, 2 oz. of lettuce and 1/4 cup of milk. Place in a warm, dry place for 12 hours. Reweigh each item. Calculate the percent of weight loss. Were weight changes observed in all foods? What kind of changes were observed? Which food had the greatest amount of moisture per volume of solids? Which food would provide the body with more water?		

ESSENTIAL NUTRIENTS: WATER

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Create nutritious beverages which have water as a base.		
		Place signs saying "Water--An Essential Nutrient" above all drinking fountains in the school hallways.		
	Demonstrate why water is important in the preparation of food	Water acts as a medium for heat transfer. Prepare 2 cups of carrots. Place 1 cup in an old pan without water. Place the other in a pan with 1/2 cup water. Heat each pan for several minutes. Did the pan without water get even heat distribution? Compare the quality of the carrots.		
		Water acts as a cleansing agent to remove soil and microorganisms from food, work surfaces, and cooking utensils. Why is this important in terms of health? Make a chart of temperatures of water necessary to destroy bacteria.		

ESSENTIAL NUTRIENTS: PROTEIN

COMPETENCIES The student will be able to:

- identify the value of protein in the daily diet.
- name the smaller units which make up protein.
- distinguish between "essential" and "non-essential" amino acids.
- identify food sources of protein.
- distinguish between proteins of high biological value and proteins of low biological value.
- observe the effects of heat on protein foods.
- predict the effects excess heat would have on meat.
- discuss the reasons the body needs protein.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A sufficient intake of protein which includes all eight essential amino acids is necessary for a healthy body.	Identify the value of protein in the daily diet	As an introduction, view a film on protein and its role in human nutrition.		
	Name the smaller units which make up proteins	Amino acids are joined together to form protein. Twenty amino acids have been identified.		
	Distinguish between "essential" and "non-essential" amino acids	Of these 20 amino acids, 8 must be supplied to us through the food we eat. Why? What are they called? Why are the other 12 termed "non-essential?"		
	Identify food sources of protein	Prepare a tasting party featuring protein rich foods. Include some favorites such as cheeseburger, milkshake, pizza, and peanut butter.		

ESSENTIAL NUTRIENTS: PROTEIN

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Distinguish between proteins of high biological value and proteins of low biological value	Name several foods which supply our bodies with protein. Which of these foods contain complete or high biological protein? Why? Which of these foods contain incomplete, low-biological value protein? Why? Basically, food sources of protein can be placed into two broad categories (animal and plant origin). What generalizations can be made concerning these two groups? (i.e., animal--complete proteins, plant--incomplete).		
		NOTE: See also section entitled Four Food Groups and Meal Planning, "Protein Group," "Milk Group," and "Bread and Cereal Group."		
	Observe the effects of heat on protein foods	The fact that people like some foods warm is a learned response, rather than a problem stimulating the discovery of heat as a solution. However, applying heat in preparing food has several purposes. The protein in foods coagulates or solidifies when heat is applied.		

ESSENTIAL NUTRIENTS: PROTEIN

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Protein foods become more palatable and a more useful ingredient with other foods when heat is applied. Starch also becomes more useful in food combinations and more digestible in your body when heat is used effectively. Excess heat leads to overcoagulation, toughness and undesirable products. Optimal heating results in a tender, sanitary, palatable product. Perform experiments PRO-1 and PRO-2; record observations. Explain results.		

ESSENTIAL NUTRIENTS: PROTEIN

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		PRO-1. Effect of heat on protein Materials needed Saucepan 1/2 cup milk Procedure 1. Heat milk rapidly in pan for several minutes. 2. Observe what happens. Observation Describe what happened____________________ ____________________________________ Questions What actually happens when a food curdles?____ ____________________________________ Why did the milk curdle?____________________ ____________________________________		

ESSENTIAL NUTRIENTS: PROTEIN

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Explanation Albumin, the protein in milk, coagulates or solidifies when heat is applied. As it coagulates, the albumin precipitates to the bottom of the container and combines with calcium salts. As a result, the combined protein will scorch easily unless milk is heated in a double boiler or stirred while heating. PRO-2. Effect of heat on protein Materials needed 2 eggs 1 small fry pan 2 teaspoons cooking fat Procedure 1. Melt one teaspoon fat in fry pan on low heat. 2. Add one egg and fry, keeping heat low. 3. Before frying the second egg, add remaining fat, using high heat.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		4. Add second egg and fry, keeping heat high. 5. Record observations. Cut with a fork to check tenderness. Observations Egg — Appearance — Tenderness 1 2 Questions Which egg was tender?____________ Which egg had the best appearance?________ Meat is also a protein food. How would the results of this experiment apply to cooking meat?____________		

ESSENTIAL NUTRIENTS: PROTEIN

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		How would the effect of heat on protein relate to the use of eggs in puddings?______________ ____ In cakes?___________________________________ In meat loaf?_______________________________ Explanation Heat affects the protein in foods. Excess heat results in a tough and shrunken coagulation. Optimum temperature will produce a tender, opaque coagulation of egg albumen. A uniform coagulation of egg protein mixed with other ingredients acts as a thickening agent in foods, such as puddings; as a strengthening agent in cake mixtures; and as a binder in such foods as meat loaves.		

206

207

ESSENTIAL NUTRIENTS: PROTEIN

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Predict the effects excess heat would have on meat	Why is it important to cook meats at the optimum temperatures?		
	Discuss the reasons our body needs the protein found in many foods	Have one interested student present an oral report to the class on Protein-Calorie Malnutrition. Discuss areas in the world where it is most prominent. Compare the diets of developing countries to our American diet. What types of foods are lacking in underdeveloped countries? Proteins (specifically the eight essential amino acids) are needed for growth of body tissues in growing children, teenagers, pregnant women, and for the maintenance and replacement of body tissues in adults. Design a large poster portraying: 1. an unhealthy, unhappy, underweight teenager who is not receiving all essential amino acids in his/her diet. 2. a healthy, happy, well nourished, smiling teenager who is receiving all eight essential amino acids.		

ESSENTIAL NUTRIENTS: PROTEIN

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Protein is needed for the formation of essential body compounds. Some hormones are protein substances. All enzymes are proteins. Proteins are found in blood. The proper amount of protein in our bodies regulates water balance. Protein stimulates the formation of antibodies. Why are antibodies important? Ask a local doctor to talk on antibodies and what they do to fight disease. What role does a healthy body plan in preventative medicine?		

ESSENTIAL NUTRIENTS: ENERGY

COMPETENCIES The student will be able to:

define the term "kilocalorie."

identify the energy value of foods by determining the amount of kilocalories they provide.

discuss the body's need for energy.

estimate your need for energy according to the established Recommended Daily Allowance (RDA).

analyze the term "caloric imbalance."

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The optimum intake of energy is necessary for a healthy body.	Define the term "kilocalorie"	Brainstorm to define calorie. From what science does the term come? Compare your definition to "the amount of heat needed to raise the temperature of one kilogram of water one degree centigrade: called kilocalorie: used as the unit for measuring the energy provided by food when oxidized in the body.		
	Identify the energy value of foods by determining the amount of kilocalories they provide	The energy value of a diet is provided entirely by its carbohydrate, fat, and protein components: 1 gram of carbohydrate yields 4 kcal. 1 gram of protein yields 4 kcal. 1 gram of fat yields 9 kcal. Calculate the number of kilocalories in 10 grams of carbohydrate, 20 grams of protein, and 5 grams of fat.		

<table>
<tr><th>Key Concept</th><th>Competency</th><th>Suggested Activities</th><th>Resources</th><th>Evaluation</th></tr>
<tr><td></td><td></td><td>
Determine the number of kilocalories provided by 1 apple, 1 cup of whole milk, 1 cup of skim milk, 1 slice of bread, 1/2 cup of broccoli, 1 teaspoon of margarine, 3 oz. hamburger patty, and 1/2 cup carrots.
<table>
<tr><th>Name of Food</th><th>Measures</th><th>Carbohydrate gms.</th><th>Protein gms.</th><th>Fat, gms.</th><th>Kcal</th></tr>
<tr><td>Whole milk</td><td>1 c.</td><td>12</td><td>8</td><td>10</td><td></td></tr>
<tr><td>Skim milk</td><td>1 c.</td><td>12</td><td>8</td><td>0</td><td></td></tr>
<tr><td>Apple</td><td>1 med</td><td>10</td><td>0</td><td>0</td><td></td></tr>
<tr><td>Broccoli</td><td>1/2 c.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Bread*</td><td>1 slice</td><td>15</td><td>2</td><td>0</td><td></td></tr>
<tr><td>Margarine</td><td>1 tsp</td><td>0</td><td>0</td><td>5</td><td></td></tr>
<tr><td>Carrots</td><td>1/2 c.</td><td>7</td><td>2</td><td>0</td><td></td></tr>
<tr><td>Hamburger</td><td>3 oz.</td><td>0</td><td>14</td><td>15</td><td></td></tr>
</table>
*enriched
</td><td></td><td></td></tr>
</table>

ESSENTIAL NUTRIENTS: ENERGY

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Discuss the body's need for energy	View a chart constructed by students. Compare the amounts of various foods needed to supply 100 kcal. Discuss reasons for these differences. Define the term basal metabolism. Many factors affect basal energy needs. Have a group of students volunteer to identify these factors and construct a bulletin board which illustrates their findings. Have the group discuss these factors with the entire class. Physical activity increases the body's need for energy. Explain how the type of activity, the duration of activity and the size of the individual performing the activity affects the amount of energy required. Why do athletes need to consume more food than students who are relatively inactive? How can exercise be used in a weight loss program? (See section entitled Special Nutritional Concerns: "Obesity and Underweight.") Have students estimate their own levels of activity. How does their need for energy		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		(food) compare with other members of the class?		
	Estimate your need for energy (kcal) according to the established RDA	What does "Recommended Daily Allowances" mean? Who has established the RDA? How does Recommended Daily Allowances differ from Minimum Daily Requirements? Use the table of RDA to determine the approximate amount of kilocalories needed. Why do teenagers need more kilocalories than full-grown adults? Discuss how individual differences in metabolic rate and activity level influence the amount of energy a person needs. What does this tell about the RDA? (It is only a guide.)		
	Analyze the term "caloric imbalance"	Explain what happens to a person's weight when their: energy (food) intake = energy expenditure (answer: no change in body weight), energy intake is greater than their energy expenditure (answer: gain in weight), energy intake is less than energy expenditure (answer: weight loss).		

ESSENTIAL NUTRIENTS: ENERGY

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Apply these facts to your present weight. Are you consuming the correct amount of calories? Construct a mobile depicting three teenagers, one consuming too many calories (overweight), one consuming too few calories (underweight), and one "just right."		

220

221

ESSENTIAL NUTRIENTS: FAT

COMPETENCIES The student will be able to:
- discuss why fat in the diet is desirable.
- explain why body fat is important for a healthy body.
- identify foods which are high in fat.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The optimum intake of fat is necessary for a healthy body.	Discuss why fat in the diet is desirable	As an introduction, view a film on, or including, fat and its role in human nutrition. Fat is a concentrated supplier of energy. Make a poster of foods containing fat pointing to the word ENERGY. Fats provide satiety value to the diet. Discuss why diets with an extremely limited fat intake are difficult to "stick-to." Ask the students to eat a breakfast containing whole milk, bacon and sausage. One day later ask them to eat a breakfast of orange juice, dry toast and oatmeal. Conduct a survey to see which satisfied their appetite longer. List as many ways as possible that fat increases the palatability of food, e.g., salad dressings, seasonings, etc.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Dietary fat serves as a carrier for fat-soluble Vitamins A, D, E, and K. Role play "Fat" carrying Vitamins A, D, E, and K to the "body." Ask "Fat" to leave the room. Do the fat soluble vitamins reach the "body" without his aid?		
	Explain why body fat is important for a healthy body	Fat tissue acts as a reserve for energy. Make a poster of a bear hibernating in a cave. What "feeds" this bear throughout the long winter? How do persons on "starvation diets" continue to live without daily food intake? Fat acts as an insulator against shock from changes in the environmental temperature. Make a poster containing three girls playing in the snow. Make one girl a "stick-figure" and illustrate her shaking from the cold. The second girl is of normal weight and enjoys the outdoors. The third girl is extremely overweight. Illustrate that she is hot and tired from playing in the snow. Fat protects vital body organs. Place two eggs in a cardboard box. Move the box quickly. What happens to the eggs? Next put two eggs		

224

225

ESSENTIAL NUTRIENTS: FAT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		in the box and pack with tissue. Now move the box quickly. Are the eggs better protected. Excess fat on a body can be harmful. Make a poster of an extremely overweight man. Illustrate a "tired" heart, unhappy blood system, etc. What activities does this man avoid? Why does this contribute to his overweight problem? (See Obesity Section.)		
	Identify foods which are high in fat	Fats in food can be identified with a grease spot left when food is on paper. Foods with considerable amounts give a more intense grease spot than those containing small amounts of fat. On separate pieces of typing paper, place each of the following: a small piece of butter, a mashed egg yolk, and 1/4 tsp. whole milk. Remove the butter and egg yolk after a few minutes. Allow the milk to dry in the sunlight or on a radiator. Compare the grease spots. Which food contains the most fat? The least? Although not conclusively proven, a lowering of saturated fat intake and a higher intake		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		of unsaturated fats appears to be helpful against certain vasculature and heart problems. Make a list of ways to increase the intake of unsaturated fats (e.g., by frying with vegetable oil instead of butter). Student Project: Take a survey of issues relevant to cholesterol that the students in the class have heard. Check with a dietitian or other knowledgeable source as to whether these are valid concerns. Why is this such a controversial issue? Make an unbalanced mobile of foods high in saturated fats (heavy) and foods high in unsaturated fats (light). Mineral oil is a fat frequently used in low-calorie salad dressing. This oil passes right through the body and takes fat-soluble vitamins with it. What are the implications if this oil is put on a salad high in Vitamin A? Will the body ever be able to utilize this Vitamin A?		

ESSENTIAL NUTRIENTS: CARBOHYDRATES

COMPETENCIES The student will be able to:
discuss why carbohydrates are necessary for a healthy body.
identify foods which are high in carbohydrates.
discuss why cooking foods high in carbohydrates is beneficial to digestion.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
An optimun intake of carbohydrates is necessary for a healthy body.	Discuss why carbohydrates are necessary for a healthy body	As an introduction, view a film on, or including, carbohydrates and the role they play in human nutrition. Carbohydrates serve as a major source of energy. A lack of carbohydrates causes fatigue, dehydration and loss of energy. What are the other two main dietary sources of energy? Make a poster of foods high in carbohydrates pointing to the word ENERGY. Carbohydrates come in two basic forms--simple and complex. Simple carbohydrates include sugar. Sugar has tentatively been linked to health problems. Make a poster of a mouth with severe tooth decay. Surround with candy bar wrappers and concentrated carbohydrate sources. Excess intake of sugar may be linked to increased incidence of atherosclerosis. Call		

ESSENTIAL NUTRIENTS: CARBOHYDRATES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		a local doctor and ask his opinion on this controversial topic. Complex carbohydrates are made of simple carbohydrate units. It takes the body longer to break complex carbohydrates down, thus providing more satiety value. Make a list of simple carbohydrate foods and complex carbohydrate foods. Have students consume a lunch high in simple sugars and another high in complex carbohydrates. Record number of hours before that "hungry feeling sets in."		
	Identify foods which are high in carbohydrates	Make a list of snacks containing carbohydrates. Make a mobile of foods high in simple sugars balanced by complex carbohydrates. Test for the complex carbohydrate, starch. Iodine turns purple when making contact with starch. The best iodine source is a bottle of tincture of 1% iodine. This will give the best color results. Treat each of the following with a drop of iodine: 1 slice of bread, 1 slice of raw potato, and the white of a hard-cooked egg.		

ESSENTIAL NUTRIENTS: CARBOHYDRATES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		The amount of starch present in each can be compared by observing the intensity of the purple color. To what color did the iodine change on the bread and potato? Why did no color change appear on the egg white?		
	Discuss why cooking foods high in carbohydrates is beneficial to digestion	Cooking breaks down tough walls to make starch available for digestion. Prepare 1/2 cup of popcorn. How does heat affect the wall of the corn kernel? What is the food inside the kernel wall? In cooking, how else could you get through the tough seed coating of foods similar to corn? (e.g., soaking dry beans).		

TRADE VOCABULARY

anemia
rickets
appetite
cheilosis
muscle tone
dermatitis
diarrhea
depression
acid
alkali
oxidation
collagen
infection
scurvy
kilocalorie
basal metabolism
enriched

whole grain
fiber
refined
palatability
night blindness
dermatologist
infection
pliable
blood clot
osteoporosis
enriched
essential
heat transfer
microorganisms
fatigue
dehydration
atherosclerosis

satiety
obesity
behavior modification
simple carbohydrate foods
complex carbohydrate foods
palatability
fat soluble
saturated fats
unsaturated fats
cholesterol
essential amino acid
non-essential amino acid
complete proteins
incomplete proteins
hormones
enzymes
antibodies

FOUR FOOD GROUPS AND MEAL PLANNING

COMPETENCIES The student will be able to:

identify the basic four food groups.
discuss various types of milk and milk products included in the milk group.
identify the major nutrients provided by the milk group.
identify the number of servings from the milk group needed each day.
compare the amounts of various foods in the milk group that count as one serving.
discuss the types of foods included in the fruit and vegetable group.
identify the major nutrients provided by the fruit and vegetable group.
identify good and fair sources of Vitamin C.
identify foods from the fruit and vegetable group which are sources of Vitamin A.
identify the number of servings from the fruit and vegetable group needed each day.
compare the amounts of various foods in the fruit and vegetable group that count as one serving.
identify foods included in the protein group.
identify the major nutrients provided by the protein group.
identify the number of servings from the protein group needed each day.
compare the amounts of various foods in the protein group that count as one serving.
identify foods included in the bread and cereal group.
identify the major nutrients provided by the bread and cereal group.
identify the number of servings from the bread and cereal group needed each day.
compare the amounts of various foods in the bread and cereal group that count as one serving.
identify other foods eaten each day.
discuss reasons for including these other foods in the daily diet.
demonstrate the acquisition of basic concepts concerning the four food groups.
evaluate a day's food intake using the basic four food groups as a guide.
analyze a twenty-four hour record of food intake.
support the inclusion of breakfast in the daily diet.
design a breakfast which includes sources of protein, calcium, Vitamin C, and riboflavin.
relate the foods included in the breakfast meal to the four food groups.
identify the major purpose of the school lunch program.
analyze contributions the school lunch makes to your daily food intake.

FOUR FOOD GROUPS AND MEAL PLANNING

COMPETENCIES The student will be able to:

- evaluate the dinner meal using the four food groups as a guide.
- discuss the role of snacks in the daily diet.
- identify snacks which would be included in each of the four food groups.
- create nutritious low calorie snacks which would appeal to teenagers.
- support the statement "snacking can be good for you."
- plan a meal pattern for one day using the four food groups as a guide.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The four food groups concept sorts foods into four groups on the basis of their similarity in nutrient content. Food from each of these broad groups contributes to an adequate diet.	Identify the basic four food groups	As an introduction, view a film on the basic four food groups. Read handouts outlining the four food groups. [See page 155. "EVERYDAY!! The Four Food Groups Guide."] Take a study tour to a large supermarket. Observe the variety of foods available in each of these four basic groups. Discuss the four food groups included in the basic four. Have students design a "Daily Food Guide" bulletin board with four sections labeled milk group, fruit-vegetable group, meat group, and bread-cereal group.		
	Discuss various types of milk and milk products included in the milk group	Visit local creamery or dairy farm. Discuss the importance of milk.		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the major nutrients provided by the milk group	What foods in this group are most frequently eaten by the students? Arrange magazine cut-outs of products included in this group under the appropriate heading on bulletin board. Play "Box in the Nutrients" to determine what nutrients are provided. Recall reasons why everyone needs these nutrients. Add the names of these nutrients to bulletin board.		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		BOX IN THE NUTRIENTS Draw a box around the letters that spell: • A mineral in milk that helps make teeth and bones strong. • A vitamin added to milk to help make teeth and bones strong. • Nutrients (one word) in milk that are used to build and repair the body. • A nutrient in milk that helps you use energy and helps keep your skin healthy. J P C A L C I U M L B M E N T M N Q K W E H V I T A M I N D P U T M N Q T H Y N F G R P R P R P R O T E I N S T A R I B O F L A V I N W T T S M I N		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the number of servings from the milk group needed each day	Determine the number of servings consumed each day by these students. Are they consuming the recommended four each day? Why do growing teenagers need more milk than adults? Pin the number four on bulletin board under the milk group section.		
	Compare the amounts of various foods in the milk group that count as one serving	Observe a display of milk and milk products showing equivalent serving sizes necessary to provide the amounts of calcium and protein in 1 cup of whole milk. Infer the differences in nutrient content, especially caloric levels vs. levels of protein and calcium in these foods.		
		Relate the Recommended Daily Allowance (RDA) for the students age group to the recommended four servings for the milk group. Consider especially protein, calcium, and riboflavin requirements.		
	Discuss the types of foods included in the fruit and vegetable group	Visit a wholesale distributor of fruits and vegetables (or a local supermarket). Note: the conditions under which the fresh food is kept, the number of food items available, and the price.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Have the students name as many fruits and vegetables as they can. Arrange magazine cutouts of various fruits and vegetables under the appropriate heading on bulletin board.		
	Identify the major nutrients provided by the fruit and vegetable group	Listen as the teacher names what nutrients are provided. Add names of these nutrients to bulletin board. Recall why these nutrients are needed.		
	Identify good and fair sources of Vitamin C	Supply students with a list of foods which are good sources of Vitamin C. Have students circle ones eaten by people they know.		
		Mention other fair sources of Vitamin C. Have students name Vitamin C rich foods which they have eaten recently or plan to eat in the coming week. Rearrange the bulletin board and group Vitamin C foods together.		
		Prepare Zingy Fruit Cup. Which of the foods used is a Vitamin C food?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Zingy Fruit Cup Cut 2 or 3 kinds of fresh fruit into bite-size pieces. Use about one medium-sized fruit for each person. Mix fruit with some orange juice. Use about 1/4 cup juice for each person. Serve in little cups or dishes.		
	Identify foods from the fruit and vegetable group which are sources of Vitamin A	Color is the clue. Your body makes Vitamin A from the coloring matter in vegetables. The darker the color, the more Vitamin A. Have students name as many dark green and deep yellow vegetables as possible. List these vegetables on chalkboard. Add to this list those sources not mentioned by students. Compare visually the degree of greenness in a leaf of lettuce and a stalk of broccoli. Which has more Vitamin A? Have students rearrange the bulletin board grouping Vitamin A rich foods together.		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the number of servings from the fruit and vegetable group needed each day	Four servings are needed daily--including one serving of a good source of Vitamin C or two servings of a fair source, one serving of a good source of Vitamin A every other day. Have students portray these facts on the bulletin board. Explain reasons why Vitamin C is included each day and Vitamin A every other day. Have students make a chart showing levels of Vitamin C and Vitamin A in different fruits and vegetables. Chart should be ordered from highest to lowest levels.		
	Compare the amounts of various foods in the fruit and vegetable group that count as one serving	Observe a display of fruits and vegetables showing appropriate serving sizes. Relate the Recommended Daily Allowance (RDA) for the students' age group to the recommended four servings from the fruit and vegetable group. Consider especially Vitamin C and Vitamin A requirements. Have a report to the class by a student on other nutritional benefits of the fruit and vegetable group to the diet. Include: iron,		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		calcium, thiamin, riboflavin, fiber, appetite stimulation.		
	Identify foods included in the protein group	Students shall name as many foods in this group as possible. Call attention to those not mentioned (i.e., dry beans, eggs, dry peas, peanuts, peanut butter, etc.). Arrange magazine cutouts under the appropriate heading on bulletin board.		
	Identify the major nutrients provided by the protein group	Listen as the teacher names the nutrients provided by the protein group. Add names of these nutrients to bulletin board. Recall why we need these nutrients.		
	Identify the number of servings needed each day	Have students recall the number of servings they usually have each day. Do they have at least the recommended two? Pin the number two on bulletin board under meat group.		
	Compare the amounts of various foods in the protein group that count as one serving	Observe a display showing appropriate serving sizes of foods in this group. Relate the Recommended Daily Allowance (RDA) for the students' age group to the recommended two servings from the protein group. Consider		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		especially protein, iron, thiamin, riboflavin, niacin, and fats. Iron is especially high in red meats and in organ meats such as liver. Have a group of students determine the amounts of iron found in various types of meat (e.g., fish, poultry, beef, pork). Why is iron high in red meats and liver? Which of the B vitamins does pork provide?		
	Identify foods included in the bread and cereal group	Visit a supermarket, select cereals and baked goods which are enriched or made from whole grains. Determine this information by observing information on labels. If the products are enriched, with what nutrients are they most often enriched? Arrange magazine cutouts of products included in this group under the appropriate heading on bulletin board. Why must bread and cereal products made from refined grains be enriched? Select one student to research this topic and report the findings orally to other members of the class.		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the major nutrients provided by the bread and cereal group	Listen as the teacher names the nutrients provided by the bread and cereal group. Recall reasons why we need these nutrients. Add the names of these nutrients to your bulletin board.		
	Identify the number of servings from the bread and cereal group needed each day	Have one student present an oral report on the importance of fiber in the diet. Include in this report sources of fiber such as fruits and vegetables and whole grain breads and cereals.		
		How many servings do the students usually eat each day? Are they consuming the recommended four each day? Pin the number four on bulletin board.		
	Compare the amounts of various foods in the bread and cereal group that count as one serving	Observe a display of bread and cereal products showing typical serving sizes. Do students normally eat only one serving at a meal?		
		Relate the Recommended Daily Allowance (RDA) for the students' age group to the recommended four servings from the bread and cereal group. Consider especially carbohydrates, iron, thiamin, and niacin.		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify other foods eaten each day	Name other foods eaten to complete meals (i.e., fats, oils, sweets).		
	Discuss reasons for including these other foods in your daily diet	Compare the taste of (1) a plain vegetable and one served with margarine, salt, and pepper; (2) a hamburger served with and without ketchup. Have students name other ways to improve the taste and palatability of foods. These "other" foods supply calories and can add to total nutrients in meals. Discuss the fact that teenagers must include at least the required number of servings from each group, but usually eat additional servings to supply the body with the required amount of energy to carry out an "active" life.		
	Demonstrate the acquisition of basic concept concerning the four food groups	Complete a handout provided by the instructor. The handout should ask the students to: 1. identify the four food groups and the foods that are included in each group, 2. identify the number of servings needed daily from each group, 3. match the nutrients to food group sources.		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Evaluate a day's food intake using the basic four food groups as a guide	Divide students into groups of four each. Provide different daily food intakes to be evaluated by each group. (Use an example given by the teacher as a guide.) Have groups compare their findings.		
	Analyze a twenty-four hour record of food intake	Students will keep a 24-hour record of all foods eaten and the approximate amounts. Include all snacks. Using the record they were asked to keep, each student will evaluate their own daily food intake. Discuss in class: How many servings were included from each group? How many more servings are needed to meet the recommended number? Does this 24-hour recall represent a "typical" daily pattern for the student? What nutrients are provided by these foods? What nutrients are lacking? What is the day's total caloric intake?		
	Support the inclusion of breakfast in the daily diet	View a filmstrip on the importance and origin of breakfast. Do most of the students usually eat breakfast? Why or why not? Discuss foods generally eaten at the breakfast meal. What		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		nutrients do these foods provide? (i.e., citrus fruits and juices, egg, toast, cereal, milk). Recall the feeling of hunger experienced in the mid-morning if no food is eaten before lunch. Does this affect the ability to concentrate in class? Discuss the benefits of breakfast.		
	Design a breakfast which includes sources of protein, calcium, Vitamin C, and riboflavin	Have each student create a breakfast which they would look forward to eating. This need not be the conventional fruit, cereal, toast, and beverage pattern. Dare them to be different. Have students share their ideas visually (make a colorful mobile portraying breakfast ideas) and orally with members of the class. Try these new ideas at home.		
	Relate the foods included in the breakfast meal to the four food groups	Determine how many servings from the four food groups are provided by breakfast. How many more do you need to complete your day's requirements?		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the major purposes of the school lunch program	Discuss the program with the school lunch director. Students should be encouraged to voice their opinions. Is the lunch provided by your school meeting the stated objectives?		
	Analyze contributions the school lunch makes to your daily food intake	Each student should evaluate his/her lunch using the four food groups as a guide. How many servings from each group were included? What nutrients were provided? Add this total to your breakfast total. How many more servings do you need today from each group to complete your requirements?		
	Evaluate the dinner meal using the four food groups as a guide	Are you receiving servings from each of the four food groups? Discuss the importance of the foods eaten with your family. Tell them what nutrients these foods provide and why these nutrients are needed by your body. Add the total servings from each group to your total from lunch and breakfast. Have your day's requirements been met?		
	Discuss the role of snacks in the daily diet	Why do people snack? (i.e., social acceptability, hunger, habit, supply additional nutrients). What snacks do the students include in their diet?		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify snacks which would be included in each of the four food groups	Name three snacks in each of the four food groups. What nutrients are provided by these snacks? Draw pictures of the super snacks from the food groups. Why are they super snacks? (i.e., ice cream, milk group). Pizza is a super snack. Why? Discuss reasons why candy and soda pop are not considered super snacks. When would these be harmful to teenagers? (Especially when they interfere with an adequate nutrient intake and when they supply calories above the amount needed to maintain ideal weight.)		
	Create nutritious low calorie snacks which would appeal to teenagers	Prepare some of these "super snacks" in lab. Use recipes given by the teacher or dream up your own. Try them out. Which of these would win a SUPER rating for taste? Visit a supermarket to check costs. Which would be easy on the budget? Prepare some of these snacks at home so your family can enjoy them too. Tell your family why these snacks are good for you. Get together with some friends and organize a party. Plan to serve some super snacks.		

FOUR FOOD GROUPS AND MEAL PLANNING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Support the statement "snacking can be good for you"	Design a poster with this theme. Show some super snacks. Hang the poster in your lunchroom for other students to observe.		
	Plan a meal pattern for one day using the four food groups as a guide	Include in your pattern Breakfast, Lunch, and Dinner meals plus nutritious snacks (if snacking is an integral part of your total eating pattern). Select foods which are available to you. Ask your mother what foods she is planning to serve for breakfast and dinner and check the school lunch menu to see what foods will be served for that particular day. Analyze the day's food intake. Are you receiving all the nutrients you need for a healthy, happy you?		

EVERYDAY !! The Four Food Groups Guide

MILK GROUP

Some milk for everyone

Children under 9 ...	2 to 3 cups
Children 9 to 12 ...	3 or more cups
Teenagers	4 or more cups
Adults	2 or more cups

MEAT GROUP

2 or more servings

Beef, veal, pork, lamb, poultry, fish, eggs

As alternates -

dry beans, dry peas, nuts

VEGETABLE AND FRUIT GROUP

4 or more servings

Include -

*A citrus fruit or other fruit or vegetable important for Vitamin C--daily

*A dark-green or deep-yellow vegetable for Vitamin A--at least every other day

*Other vegetables and fruits, including potatoes

Plus other foods as needed to complete meals and to provide additional food energy and other food values.

BREAD AND
CEREAL GROUP

4 or more servings

Whole grain,
enriched, or
restored.

Each day our food should supply us with many different nutrients--

* Protein for growth and for repair of the body.

* Minerals and vitamins for growth and to keep the body functioning properly.

* Fat and carbohydrate for energy.

Most foods contain more than one nutrient. But no single food contains all the nutrients in the amounts we need. Therefore, choosing foods wisely means selecting kinds that together supply nutrients in the amounts needed.

This "EVERYDAY!! The Four Food Groups Guide" is one way to choose food wisely. With it, you can get the nutrients needed from a variety of everyday foods.

HOW TO USE THIS GUIDE

In using this "EVERYDAY!! The Four Food Groups Guide" you select the main part of your diet from four broad food groups. To this you add other foods as needed to make your meals more appealing and satisfying.

Some pointers to guide you in using this plan:

* Choose at least the minimum number of servings from each of the broad food groups.

  Serving sizes may differ--small for young children, extra large (or seconds) for very active adults or teenagers. Pregnant and nursing women also require more food from these groups.

* Make choices within each group according to suggestions given on the following pages. Foods within each group are similar, but not identical, in food value.

* Choose the additional foods to round out your meals both from foods in the four groups and from foods not listed in these groups. These additional foods should add enough calories to complete your food energy needs for the day. Children need enough food energy to support normal growth; adults need enough to maintain body weight at a level most favorable to health and well-being.

* Try to have some meat, poultry, fish, eggs, or milk at each meal.

VEGETABLE-FRUIT GROUP

1. FOODS INCLUDED

All vegetables and fruit. This guide emphasizes those that are valuable as sources of Vitamin C and Vitamin A.

Sources of Vitamin C

Good Sources--Grapefruit or grapefruit juice; cantaloup; orange or orange juice; guava; mango; papaya; raw strawberries; broccoli; brussel sprouts; green pepper; sweet red pepper.

Fair Sources--Honeydew melon; lemon; tangerine or tangerine juice; watermelon; asparagus tips; raw cabbage; collards; garden cress; kale; kohlrabi; mustard greens; potatoes and sweet potatoes cooked in the jacket; spinach; tomatoes or tomato juice; turnip greens.

Sources of Vitamin A

Dark-green and deep-yellow vegetables and a few fruits, namely: apricots, broccoli, cantaloup, carrots, chard, collards, cress, kale, mango, persimmon, pumpkin, spinach, sweet potatoes, turnip greens and other dark-green leaves, winter squash.

2. CONTRIBUTION TO DIET

Fruits and vegetables are valuable chiefly because of the vitamins and minerals they contain. In this plan, this group is counted on to supply nearly all the Vitamin C needed and over half of the Vitamin A.

Vitamin C is needed for healthy gums and body tissues. Vitamin A is needed for growth, normal vision, and healthy condition of skin and other body surfaces.

Vegetable-Fruit Group continued

3. AMOUNTS RECOMMENDED

Choose 4 or more servings per day, including:

1 serving of a good source of Vitamin C or 2 servings of a fair source.

1 serving, at least every other day, of a good source of Vitamin A. If the food chosen for Vitamin C is also a good source of Vitamin A, the additional serving of a Vitamin A food may be omitted.

The remaining 1 to 3 or more servings may be of any vegetable or fruit, including those that are valuable for Vitamin C and Vitamin A.

Count as 1 serving: 1/2 cup of vegetable or fruit; or a portion as ordinarily served, such as, 1 medium apple, banana, orange, or potato, half a medium grapefruit or cantaloup, or the juice of 1 lemon.

MILK GROUP

1. FOODS INCLUDED

Milk--fluid, whole evaporated, skim, dry, buttermilk.

Cheese--cottage, cream, cheddar-type-natural or processed.

Ice cream.

2. CONTRIBUTIONS TO DIET

Milk is our leading source of calcium, which is needed for bones and teeth. It also provides high-quality protein, riboflavin, Vitamin A, and many other nutrients.

3. AMOUNTS RECOMMENDED

Some milk every day for everyone.

Recommended amounts are given below in terms of whole fluid milk:

	8-ounce cups
Children under 9	2 to 3
Children 9 to 12	3 or more
Teenagers	4 or more
Adults	2 or more
Pregnant Women	3 or more
Nursing Mothers	4 or more

Part or all of the milk may be fluid skim milk, buttermilk, evaporated milk, or dry milk.

Milk Group continued

Cheese and ice cream may replace part of the milk. The amount of either it will take to replace a given amount of milk is figured on the basis of calcium content. Common portions of various kinds of cheese and ice cream and their milk equivalents in calcium are:

1-inch cube cheddar type cheese = 1/2 cup milk

1/2 cup cottage cheese = 1/3 cup milk

2 tablespoons cream cheese = 1 tablespoon milk

1/2 cup ice cream = 1/4 cup milk

MEAT GROUP

1. FOODS INCLUDED

Beef; veal; lamb; pork; variety meats, such as liver, heart, kidney.
Fish and shellfish.
Poultry and eggs.

As alternates--dry beans, dry peas, lentils, nuts, peanuts, peanut butter.

2. CONTRIBUTION TO DIET

Foods in this group are valued for their protein, which is needed for growth and repair of body tissues--muscle, organs, blood, skin, and hair. These foods also provide iron, thiamine, riboflavin, and niacin.

3. AMOUNTS RECOMMENDED

Choose 2 or more servings every day.

Count as a serving: 2 to 3 ounces of lean cooked meat, poultry, or fish--all without bone; 2 eggs; 1 cup cooked dry beans, dry peas, or lentils; 4 tablespoons peanut butter.

BREAD-CEREAL GROUP

1. FOODS INCLUDED

All breads and cereals that are whole grain, enriched, or restored; check labels to be sure.

Specifically, this group includes: breads; cooked cereals; ready-to-eat cereal; cornmeal; crackers; flour; grits; macaroni and spaghetti; noodles; rice; rolled oats; and quick breads and other baked goods if made with whole-grain or enriched flour. Parboiled rice and wheat also may be included in this group.

2. CONTRIBUTIONS TO DIET

Foods in this group furnish worthwhile amounts of protein, iron, several of the B vitamins, and food energy.

3. AMOUNTS RECOMMENDED

Choose 4 servings or more daily. Or, if no cereals are chosen, have an extra serving of breads or baked goods, which will make at least 5 servings from this group daily.

Count as 1 serving: 1 slice of bread; 1 ounce ready-to-eat cereal; 1/2 to 3/4 cup cooked cereal, cornmeal, grits, macaroni, noodles, rice or spaghetti.

OTHER FOODS

To round out meals and to satisfy the appetite everyone will use some foods not specified--butter, margarine, other fats, oils, sugars, or unenriched refined grain products. These are often ingredients in baked goods and mixed dishes. Fats, oils, and sugars are also added to foods during preparation or at the table.

These "other" foods supply calories and can add to total nutrients in meals.

SPECIAL NUTRITIONAL CONCERNS: OBESITY AND UNDERWEIGHT

COMPETENCIES The student will be able to:

identify the criteria of a healthy and sensible diet.
identify disadvantages the overweight person experiences in life.
identify possible causes of obesity.
demonstrate how behavior modification in relation to eating habits may be implemented.
infer why being underweight is an undesirable body state.
construct ways to show how weight may be gained.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A diet should maintain good nutrition.	Identify the criteria of a healthy and sensible diet	Consult a physician before going on a diet. Have a student call a local doctor and ask why this is a good idea. Plan to lose one to two pounds a week. Conduct a survey to see how successful quick weight loss diets have been for the students or their parents. Ask a local dietitian to speak to the class and suggest a reasonable diet. Review the nutrients provided by the basic four food groups. Why is a diet extremely low in calories possibly harmful to nutrient intake? Why is a one-food "fad" diet detrimental to nutrient intake?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		A diet high in protein and fat but low in carbohydrates may strain the kidneys and the heart. Discuss the implications of this in relation to stresses already present on the body. Have the students make a collection of diets found in magazines. Discuss these in terms of nutrients, ability to follow, and health implications Make a recipe file of foods high in nutrient value but low in calories. Have a "tasting party" using food recipes for low calorie foods. Give the most popular recipe a blue ribbon for first place.		
	Identify disadvantages the overweight person may experience in life	As an introduction, view a film on weight control and/or the hazards of obesity. Health problems occur more frequently in an overweight person. Make a poster of a person of normal weight. Add "fat" to areas which normally accumulate fat. Point to areas which		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		may be under stress and may result in health problems, e.g., the heart, lungs, and gall bladder. Have students look up their ideal weight as suggested by an "Average Weight for Height Table" and compare to present weight. Adolescence is not a time to have extreme weight loss because of growth needs. Maintaining weight at a reasonable level is important. Social disadvantages may parallel obesity. Make a list of activities a normal weight person may enjoy but the overweight person may find difficult. Are there other social implications? The overweight person may be at an economic disadvantage. Do the students feel an employer is justified in not hiring someone who may be a health hazard? Is it important that a person dealing with the public look his/her best? Living expenses may be increased for the overweight person. Make a list of possible increased costs (special clothes, transportation,		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		and various diet aids). Are these worth it if food intake is the problem? Psychological problems may result from obesity. Why might an overweight person lack security, suffer withdrawal, or have a distorted self image?		
	Identify possible causes of obesity	Genetics appears to play a part in obesity. Make a poster of two girls. One is slender and athletic, the other is rounder and less muscular but not overweight. How do the activities of these girls possibly differ? How would this affect weight gain? Physiologic factors may cause obesity but a minority of people can attribute obesity to this. Suggest reasons, including thyroid problems, endocrine problems, and the idea that in obese persons there is a faulty satiety "thermometer" that fails to register, or registers inaccurately, hunger. Environmental factors may cause obesity. Overfeeding an infant is not necessarily a good practice. Take a survey on how many students think a "chubby baby is a healthy baby."		

SPECIAL NUTRITIONAL CONCERNS: OBESITY AND UNDERWEIGHT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Hospitality includes eating food. Ask the students to recall parties, visits, and other social occasions. Was food always served? Reduction in exercise may lead to weight gain. Discuss reasons why older people gain weight and why the inactive obese person may be contributing to his/her own problem. Family food habits contribute to obesity. Discuss typical student meals. Compare to suggestions made in the Four Food Groups and Meal Planning section. Do some people always have a large intake? Psychologic factors may attribute to obesity. Have the students make a list of times when they eat the most not including meals. Is it when tests are coming? When they feel depressed or lonely?		
	Demonstrate how behavior modification in relation to eating habits may be implemented	Behavior modification can be applied to meal eating. List ways: slow consumption time, make smaller food portions look more attractive, avoid second helpings, drink plenty of water, avoid frying foods, etc.		

SPECIAL NUTRITIONAL CONCERNS: OBESITY AND UNDERWEIGHT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Behavior modification can be used to avoid problem snacks. List ways to control that snack "impulse." Behavior modification should be applied to exercise too. Make practical suggestions for increasing exercise. Follow those suggestions. Make a bulletin board depicting an obese person combining diet, exercise, and behavior modification to lose weight. Serve a low calorie lunch complete with recipes. Discuss common fallacies concerning weight control.		
Being more than 15% below desirable weight is an undesirable body state.	Infer why being underweight is an undesirable body state	A person who is more than 15% below desirable weight is more susceptible to respiratory diseases and has greater difficulty adjusting his body temperature to the environmental temperature. Make a poster containing a "stick" figure person and a normal weight person playing in the snow. Which one can adjust to the temperature better? Who is more likely to get ill from the effects of the cold?		

SPECIAL NUTRITIONAL CONCERNS: OBESITY AND UNDERWEIGHT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Construct ways to show how weight may be gained	Weight gain occurs when energy consumption exceeds energy expenditure. Suggest conditions which may aid weight gain: smaller, more frequent meals; nutritious, high calorie snacks and desserts; and a high calorie-nutrient diet. Develop recipes high in nutrients and calories.		

SPECIAL NUTRITIONAL CONCERNS: NUTRITION FOR PREGNANCY

COMPETENCIES The student will be able to:

identify why good nutrition before pregnancy is desirable.

identify why teenage pregnancy may be an especially high stress period for the girl and the baby.

identify the additions that should be made to the four food groups during pregnancy.

identify the common questions pregnant women express concerning pregnancy and their eating habits.

compare changes in diet that may help to relieve various ill-effects of pregnancy.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The health of the mother at conception and throughout pregnancy aids in producing a healthy baby.	Identify why good nutrition before pregnancy is desirable	Review the basic four food groups. As potential mothers, are the girls in the class obtaining sufficient nutrients? Discuss the importance of building body stores before pregnancy. The mother is more likely to feel good if she is healthy. Make a poster containing two pregnant women, one who is severely undernourished and the other who is healthy. Show that the malnourished woman is unhappy from the various pains of pregnancy while the other is happy and smiling.		

SPECIAL NUTRITIONAL CONCERNS: NUTRITION FOR PREGNANCY

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify why teenage pregnancy may be an especially high stress period for the girl and the baby	A teenager needs extra nutrients for her own development as well as the baby's. Why does the teenager need these extra nutrients? Discuss ill-effects which may occur to the mother and the child if these nutrients are missing. Discuss the psychological and economic implications of pregnancy. Are teenagers prepared for the sacrifices of parenthood? Why or why not? What are the effects on the child?		
	Identify the additions that should be made to the four food groups during pregnancy	Make a poster containing the necessary amount of servings from the basic four food groups for a pregnant woman. Discuss why an adult pregnant woman may only need three glasses of milk while five glasses are recommended for the pregnant teenager.		
	Identify the common questions pregnant women express concerning pregnancy and their eating habits	Should a pregnant woman "eat for two?" Yes, but not for two people her size. Refer to a chart on additions to the basic four food groups during pregnancy. Discuss appropriate weight gain during pregnancy. Do pregnant women really crave certain foods? Cravings may be caused by upsets in the body		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		or feelings. If the woman eats a good diet before and during pregnancy, she probably won't crave special foods. What cravings have the students heard occur during pregnancy? Are vitamin supplementations appropriate? Many women find it difficult to eat a well balanced diet every day for nine months. Call five doctors to survey what they recommend. Certain B vitamins such as folic acid and pyridoxine may be especially needed. Review the "B Vitamins" section of Essential Nutrients concerning these vitamins.		
	Compare changes in diet that may help to relieve various ill-effects of pregnancy	Identify diet changes which may help nausea, "morning sickness," constipation, and indigestion. Consult a local nutritionist for further information. Contact a local woman who is pregnant. If she is willing and knowledgable, ask her to speak about pregnancy and answer questions the students may have.		

SPECIAL NUTRITIONAL CONCERNS: VEGETARIAN DIETS

COMPETENCIES The student will be able to:

- discuss reasons for adopting a vegetarian diet.
- identify nutrients most likely to be inadequate in vegetarian diets.
- identify foods used in a vegetarian diet that supply our bodies with the needed protein, B vitamins, and iron.
- identify the most important factor in determining the quality of protein food.
- classify vegetarian foods as complete or incomplete proteins.
- predict how he/she would look and feel if only low biological value (incomplete) protein foods were eaten.
- discuss the two methods of combining protein foods to assure all eight essential amino acids are present at the same time.
- identify complementary and supplementary combination foods.
- prepare complementary and supplementary combination foods.
- identify foods included and excluded in the lacto-ovo vegetarian diet.
- state reasons why the lacto-ovo type of vegetarian diet is recommended in preference to those diets that exclude all animal products.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Vegetarianism is an acceptable alternative diet pattern providing nutrient intake is adequate.	Discuss reasons for adopting a vegetarian diet	As an introduction, view a film or filmstrip on vegetarianism. Discuss reasons for vegetarianism including religious convictions, the world food crisis, and a means for decreasing the total fat and/or saturated fat content of the diet.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify nutrients most likely to be inadequate in vegetarian diets	What foods are not eaten by vegetarians? (Answer: meat and flesh foods.) What important nutrients do meats supply our bodies with? (Answer: protein, iron, B vitamins.)		
	Identify foods used in a vegetarian diet that supply our bodies with the needed protein, B vitamins, and iron	What non-flesh foods provide us with protein for growth and repair of body tissues? (Answer: eggs, milk, cheese, whole wheat grain products, beans, and others.)		
	Identify the most important factor in determining the quality of protein food	The food must contain all eight essential amino acids. If all essential amino acids are not supplied to the body at the same time, the amino acids that are present will not be utilized for growth and repair but will instead be used only for energy. This is not necessary since our diets supply other adequate sources of energy. The protein will be "wasted."		
	Classify vegetarian foods as complete or incomplete proteins	Recall the definition of complete and incomplete proteins. (See Essential Nutrients: Protein.) Why are eggs, milk and milk products considered complete proteins? Why are grain		

SPECIAL NUTRITIONAL CONCERNS: VEGETARIAN DIETS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		products and vegetable sources of protein considered incomplete?		
	Predict how he/she would look and feel if only low biological value (incomplete) protein foods were eaten	Construct a poster contrasting a weak, underweight person who eats only incomplete protein foods with a healthy, energetic, adequate weight person who eats complete proteins. Identify these protein sources on the poster.		
	Discuss the two methods of combining protein foods to assure all eight essential amino acids are present at the same time	Define the key words: complement and supplement. Proteins are complemented by combining, in the same meal, lower quality plant proteins which have mutually complementary amino acid patterns. This means the essential amino acid lacking in one plant food is supplied by amino acids present in the other plant food and vice versa. Consequently, all essential amino acids are present when this combination dish is eaten. Demonstrate the concept of mutually complementary amino acid patterns by looking at mutually complementary patterns of life and		

SPECIAL NUTRITIONAL CONCERNS: VEGETARIAN DIETS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		survival in the natural world. (See Biology Instructor.) Secondly, you can supplement the amino acid pattern of incomplete plant protein with the amino acid pattern of a complete protein in the same meal. In this way the complete protein food supplies the missing amino acid and enhances the value of the incomplete protein enabling all essential amino acids to be used by the body as protein and not broken down for energy.		
	Identify complementary and supplementary combination foods	Name some of the more familiar combinations: peanut butter sandwich with milk, macaroni and cheese casserole, lentil soup. The teacher will add to this list. How many of these dishes have students tasted? What are the students' reactions?		
	Prepare complementary and supplementary combination foods	Prepare several different dishes and label them as complementary or supplementary combinations. Try them. Discuss their nutritional value and acceptance in the teenager's diet.		

SPECIAL NUTRITIONAL CONCERNS: VEGETARIAN DIETS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify foods included and excluded in the lacto-ovo vegetarian diet	Lacto-ovo vegetarian diets include dairy products and eggs but exclude all flesh foods. Dairy products and eggs are excellent sources of high quality protein. In addition, they supply other important nutrients which will most likely be lacking in a pure vegetarian diet.		
	State reasons why the lacto-ovo type of vegetarian diet is recommended in preference to those diets which exclude all animal products	Evaluate the statement: "A lacto-ovo vegetarian diet can be safe, providing proper care is taken in planning it." As a class, discuss the personal and world interest advantages of adopting a vegetarian diet.		

SPECIAL NUTRITIONAL CONCERNS: NUTRITION LABELING

COMPETENCIES The student will be able to:
identify the ways nutrition labeling can help the consumer.
state specific instances when nutrition information must be presented on the labels.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Many foods now show information about the nutrients they contain. This nutrition labeling can help you improve your diet.	Identify the ways nutrition labeling can help the consumer	Have students visit local supermarket. Note labels on certain food items such as cereal, bread, and soup. Help students become more aware of key nutrients needed for good nutrition and health by noting nutrients found in the food items. Review Energy, Vitamin, and Mineral sections of Essential Nutrients to show how they help the body function properly.		
	State specific instances when nutrition information must be presented on the labels	Any canned, processed or packaged food for which a nutritional claim is made by the producer must show nutritional content. Have students identify dietetic foods and observe labels (e.g., low-fat cottage cheese, low-fat yogurt, water packed fruits, artificial sweetners, and others). All foods to which nutrients have been added must be nutritionally labeled. Observe labels on cereal boxes. Note what nutrients have been added to these products. Review the Four Food Groups and Meal Planning section on the Bread and Cereal Group. Why are some		

SPECIAL NUTRITIONAL CONCERNS: NUTRITION LABELING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		of the nutrients added to cereal when they are naturally found in grain products? What happens to grain products during the refining process? Is whole wheat bread refined? Compare the levels of iron and B vitamins in whole wheat bread and enriched bread. Are the amounts similar? Is enrichment as healthful as the natural nutrients of food? Examine labels for ingredients found in convenience foods. What additives have been added to allow for preservation over an extended shelf life? Discuss current controversies concerning additives.		

BASIC NUTRITIONAL CONCEPTS

1. Nutrition is the food you eat and HOW THE BODY USES IT.

   We eat food to live, to grow, to keep healthy and well, and to get energy for work and play.

2. Food is made up of different nutrients needed for growth and health.

   a. All nutrients needed by the body are available thru food.
   b. Many kinds and combinations of food can lead to a well-balanced diet.
   c. No food, by itself, has all nutrients needed for full growth and health.
   d. Most nutrients do their best work in the body when teamed with other nutrients.

3. All persons, throughout life, have need for the same nutrients, but in varying amounts.

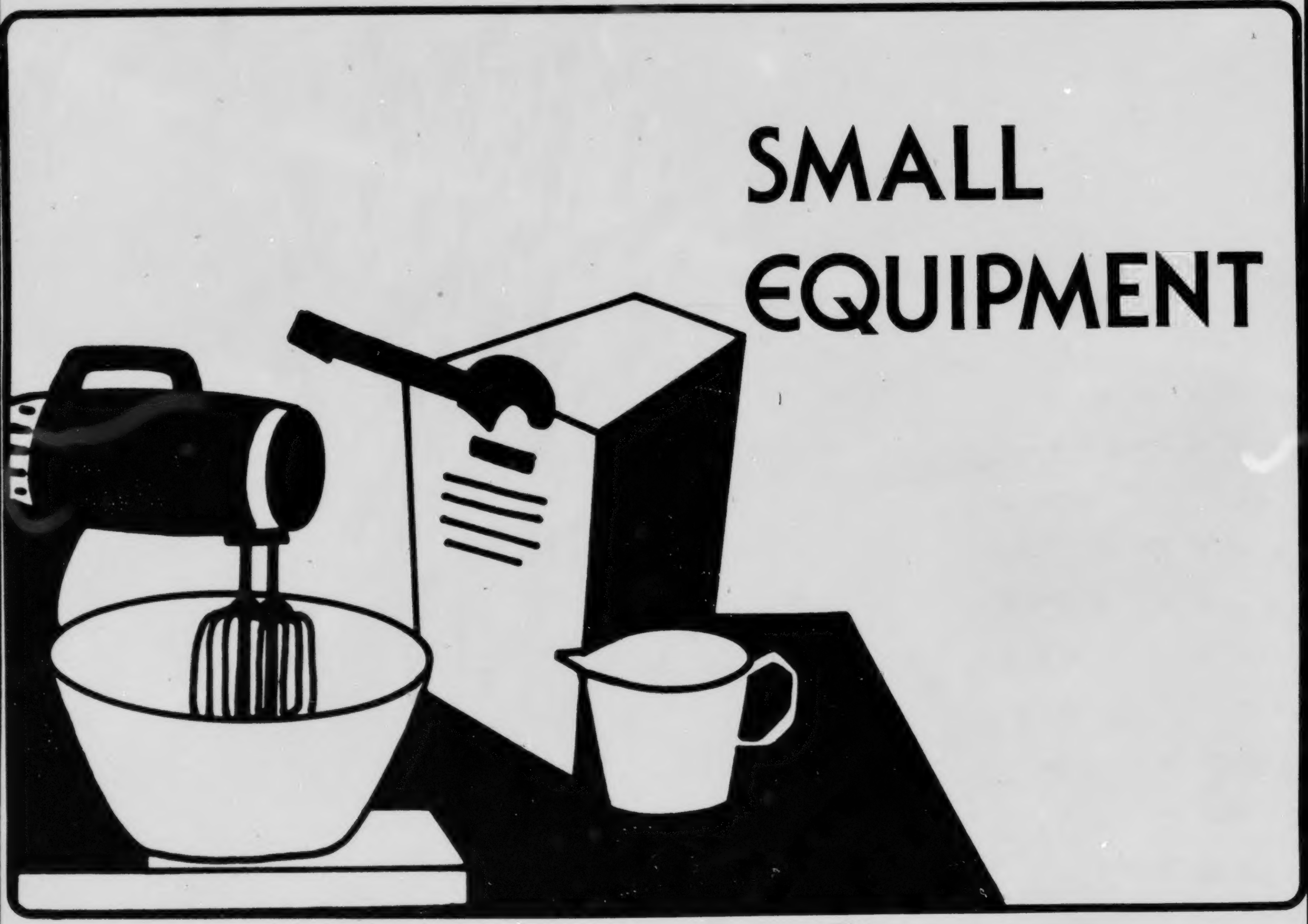
   a. The amounts of nutrients needed are influenced by age, sex, size, activity, and the state of health.
   b. Suggestions for the kinds and amounts of food needed are made by trained scientists.

4. The way food is handled influences the amount of nutrients in food, its safety, appearance, and taste.

   a. Handling means everything that happens to food while it is being grown, processed, stored, and prepared for eating.

(There are various ways of inculcating these concepts through resource materials, visual aids, etc.)

SMALL EQUIPMENT



V. Small Equipment for Food Production

Page

Synopsis 189

Performance Competencies 189

Measuring Equipment 191
    Scales
    Trade Vocabulary

Cutting Equipment 197
    Knives
    Trade Vocabulary

Pots and Pans 205
    Trade Vocabulary

Hand Utensils 211
    Trade Vocabulary

Serving Equipment 219
    Serving Utensils
    Condiment Containers
    Beverage Containers
    Trays and Carts
    Tableware
    Trade Vocabulary

Page

Small Cleaning Equipment 231
    Brushes
    Brooms
    Mops
    Trade Vocabulary

Linens 241
    Tablecloth
    Napkin
    Trade Vocabulary

Decorating Equipment 249
    Pastry Bag and Pastry Tube
    Paper Cone
    Trade Vocabulary

Can Openers 255
    Trade Vocabulary

SMALL EQUIPMENT FOR FOOD PRODUCTION

SYNOPSIS

A thorough knowledge of small equipment is necessary in the food service industry. Quality is achieved through the accurate and consistent use of measuring equipment. The proper and skilled use of decorating equipment produces customer satisfaction. Furthermore, customer satisfaction is achieved through the correct use of serving equipment and clean linens. Linens also create the pleasant atmosphere of an establishment, and they promote sanitation. Sanitary conditions are also arrived at through the use of specifically designed, small cleaning equipment.

PERFORMANCE COMPETENCIES

The student will choose safe procedures in the use and care of small equipment.

The student will gain skill in the use of small equipment.

The student will employ correct techniques in the use and care of small equipment.

MEASURING EQUIPMENT

COMPETENCIES The student will be able to:
- identify the measuring equipment used in food preparation.
- state the uses of measuring equipment used in food service.
- attempt to select the correct measuring equipment.
- identify scales used in food preparation.
- identify the parts of scales used in food service.
- state the uses of scales in food service.
- state the procedure for the care of measuring equipment.
- explain the care required by measuring equipment.
- display responsibility for the proper care of measuring equipment.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To measure ingredients in recipes accurately, one must use the appropriate measuring equipment.	Identify the measuring equipment used in food preparation	Look at a display of measuring equipment to learn the identity of each piece. Name the measuring equipment as the teacher holds each item up. What is meant by graduated markings, rim extension, and pouring lip? Name five utensils used in measuring. Draw a card from the cards provided by the teacher. The word on the card will correspond to a piece of measuring equipment. Locate the equipment named on the card. Identify the equipment for the class. Tour the ingredient room of a large institutional kitchen. Watch as ingredients for recipes are measured. What are the purposes		

MEASURING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		of the ingredient room? Is it necessary for all food service establishments to have one?		
		Replace labels by the proper measuring equipment after the instructor has removed them. Group together all equipment that might be found in a home and all the equipment not usually found in a home kitchen.		
		Name each piece of measuring equipment as it is shown on an overhead projector.		
	State the uses of measuring equipment used in food service	Watch a demonstration by the teacher to learn the uses of measuring equipment. Why are both glass and metal measuring cups used in food preparation? Which cups are used to measure liquids? Which cups are used to measure dry ingredients and why? What are the measuring spoons used for?		
In food service employment one must have the ability to select the appropriate measuring equipment.	Attempt to select the correct measuring equipment	Observe a demonstration by a cafeteria employee of the use of scales. What ingredients should be measured on scales?		
		Choose a piece of measuring equipment from the display arranged by the teacher. Identify the piece of equipment and, in your own words,		

MEASURING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		explain when it should be used. What is the difference in the dry measuring cup and the liquid measuring cup?		
Scales are used in food service to save time and ensure accuracy.	Identify scales used in food preparation	Look at picture cards to learn the identity of the types of scales used in food preparation. What are the differences in the types of scales used in food service? Locate and identify the type of scales used in the food service lab.		
	Identify the parts of scales used in food service	View a transparency to identify the parts of scales used in food preparation. Name the part of the scales as the teacher points it out on the transparency.		
		Compare the scales used in the lab with the transparency. Identify the parts of the scales.		
	State the uses of scales in food service	Watch a demonstration by a student to learn the uses of scales in food preparation. When are scales used in food preparation? Explain, in your own words, the functions of the weight indicator (called brass beam), the scoop, and the weighing platform in the operation of scales.		

MEASURING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Proper care of measuring equipment ensures accuracy and promotes the life of the equipment.	State the procedure for the care of measuring equipment	Watch a demonstration by the teacher on the care of measuring equipment. What happens to plastic measures which are neglected in their care? What happens to glass measures which are neglected in their care? Why is it important to store measuring equipment carefully?		
	Explain the care required by measuring equipment	Select from a box the name of one piece of measuring equipment. Locate the equipment and explain its care to the class.		
	Display responsibility for the proper care of measuring equipment	Wash and air dry measuring equipment after each use. Use measuring spoons only for measuring--not for mixing or stirring. Wipe the scales with a damp cloth after weighing each ingredient. Store measuring equipment carefully.		

TRADE VOCABULARY

teaspoon
pint
ounce
graduated measuring cups
scaled brass beam
tablespoon
quart
pound
liquid measuring cups
scoop
weights
cup
gallon
measuring spoons
scales
balance
weight indicator
weighing platform

CUTTING EQUIPMENT

COMPETENCIES The student will be able to:

identify the cutting devices used in food service.
state the correct uses of knives used in food preparation.
illustrate the uses of knives in food service.
relate the correct knife to a specific task.
perform a specific task in food preparation using the correct knife.
state the safety practices to be followed in the use and care of knives.
cite safety techniques for using specific knives.
attempt to safely use the correct knife for a task.
explain safety practices to be followed in the use and care of knives.
state the procedure for sharpening knives.
attempt to sharpen a knife with the sharpening steel.
display continuing desire to use, store, and care for knives in a safe manner.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Knives are designed for specific food preparation tasks.	Identify the cutting devices used in food service	View a transparency to learn the identity of cutting devices. Name the particular cutting device as the teacher points it out on the transparency. Take a field trip to a restaurant supply store to learn about the types of knives used in food service. Name four knives used in food service. View a filmstrip to learn the identity of cutting devices used in food service. Discuss the kinds of knife blades and the kinds of		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		knife handles found on the cutting devices. What is meant by point, edge, back, and handle of knife? What are the names of some of the most common knives used in food preparation? Identify the cutting devices from a display of the different hand utensils used in food service. When the cutting device is correctly identified, remove it from the display and place it on a table. Take turns identifying the equipment until all cutting devices have been removed from the display of hand utensils and placed on the table.		
	State the correct uses of knives used in food preparation	View a transparency to learn the uses of knives used in food preparation. List four knives and name the uses of each knife you have listed. Watch a film on salad preparation. For what was the French knife used? Which knife was used for sectioning the citrus fruits? Play the game of "Knif-O" (played the same as Bingo) to learn the correct use for a specific knife in food preparation. (Teacher provides the students with markers--buttons or circles		

CUTTING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		cut from construction paper--and "Knif-O" cards printed with the names of the knives. The center square on the card is a free square. The names of the knives may be used more than once.) As the teacher reads a description of a knife and its uses, place a marker on the corresponding name on the "Knif-O" card. When markers are placed on five squares in a straight line--either vertical, horizontal or diagonal--call out "Knif-O" and win the game.		
	Illustrate the uses of knives in food service	Divide the class into pairs. Prepare posters to illustrate the correct use of the most common knives used in food preparation. Illustrate the poster with a drawing or a picture of the knife; include the name of the knife, the size of the blade, and pictures of the foods the knife should be used to cut. Each team will explain its posters to the class. Place the posters in the lab for reference and review.		

CUTTING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
In order to achieve maximum efficiency and production in food service, one must select the correct knife for a particular task.	Relate the correct knife to a specific task	Choose a knife from the display arranged by a student. Identify the knife and explain the uses of the knife to the class. Select a picture of a prepared food such as salad, fruit, meat dish, etc. Locate the correct knife or knives to be used in preparing the food in the picture. Identify the knife and explain your decision to the class.		
	Perform a specific task in food preparation using the correct knife	Work in small groups to prepare the assigned salad for a salad luncheon using the appropriate knives. Practice safety when using the knives. Salads might include tossed salad, meat salad, cole slaw, fruit salad, carrot curls, radish roses, or stuffed celery.		
Safe procedures in the use, care, and storage of knives will help to eliminate accidents.	State the safety practices to be followed in the use and care of knives	Choose one of the safety guidelines listed in a handout on safety practices in using cutlery. In your own words, explain the safety practice to the class. Give two reasons for taking care of knives. Listen to a restaurant or food service manager explain the safe use and care of knives. What accidents involving knives are most common?		

335

336

CUTTING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		How should knives be placed in the dishwashing sink? How should knives be stored?		
	Cite safety techniques for using specific knives	View a filmstrip on the use, care, and safety of knives. Why does it take more than one knife to prepare a meal? What makes a quality knife? What safety procedures were observed in the use and care of knives? How should knives be stored? When carrying a knife, how should the knife be held? How do you wash and wipe a knife?		
		Watch a demonstration by the instructor on the correct use of the knives used in food preparation. What are uses for the paring knife, boning knife, French knife, butcher knife, roast slicer, and carving knife? Why is it important to know the correct use of each knife?		
	Attempt to safely use the correct knife for a task	Write your name beside one of the assigned tasks the teacher has listed on the board. Locate, in the lab, the appropriate knife for the task. When the teacher calls the name of the task, identify the knife you have chosen and demonstrate its safe use in performing the task to the class.		

CUTTING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Perform an assigned task using the correct knife in a safe manner. Tasks might include slicing and cutting raw fruits and vegetables, cutting cakes or sandwiches, coring lettuce, paring and sectioning fruits, removing eyes from potatoes, and peeling fruits or vegetables.		
Knives which are used and cared for properly will perform better and last longer.	Explain safety practices to be followed in the use and care of knives	Select a knife and explain the safe use and care of the knife to the class.		
	State the procedure for sharpening knives	Watch a demonstration by the instructor on the use of sharpening steel. What is a common test for the sharpness of the cutting edge of a knife?		
	Attempt to sharpen a knife with the sharpening steel	Take turns sharpening knives using sharpening steel under the teacher's supervision. Follow safety practices when working with knives.		
	Display continuing desire to use, store, and care for knives in a safe manner	Choose to use, store, and care for knives safely when working on assignments in the food service lab.		

TRADE VOCABULARY

cutlery
blade
handle
point
serrated
section
edge
core
peel
cut
slice
wedge
chop
dice
mince

trim
dress
peeler
salad master
bread knife
boning knife
French knife
butcher knife
paring knife
fruit and salad knife
slicer, ham and roast
electric slicing knife
table steak knife
carving fork
carving knife

cleaver
kitchen shears
potato cutter
food chopper
egg slicer
butter slicer
pizza cutting wheel
doughnut/biscuit cutter
dough cutter
narrow blade spatula
wide blade spatula
cutting board
cutlery rack
rack slots
sharpening steel

POTS AND PANS

COMPETENCIES The student will be able to:

- identify pots and pans used in food service.
- state the correct uses of pots and pans in food service.
- state safety procedures for the use and care of pots and pans in food service.
- give examples of safe procedures for use and care of pots and pans in food service.
- describe uses for specific pots and pans.
- cite proper storage of pots and pans in food service.
- give examples of proper storage of pots and pans.
- display continuing desire to use, store, and care for pots and pans in a safe manner.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Pots and pans are designed to do specific jobs for maximum efficiency and production.	Identify pots and pans used in food service	View transparencies to learn the identity of pots and pans used in food service. Name the pot or pan as the teacher points it out on the transparency. Notice the difference in the sizes of pots and pans. Compare the pots and pans found in the lab with the illustrations on the transparency. Name the pot or pan as the teacher holds each piece of equipment up. Select one pot or pan from a display arranged by a student. Identify the utensil. Name the pot or pan as the teacher shows a card with its picture on it.		

POTS AND PANS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	State the correct uses of pots and pans in food service	Watch a demonstration by the teacher to learn the correct uses of pots and pans in food service. Which pans should be used for soups, and sauces? What is a skillet used for? Which pans should be used for sauteing or cooking food in shallow fat? What is a sheet pan used for? What are bake pans used for? What is a braiser used for? Take a field trip to a restaurant supplier to learn the uses of pots and pans in food service. Name four pots and pans used in food service and the uses of each.		
An important part of food service safety is the safe use of pots and pans.	State safety procedures for the use and care of pots and pans in food service	Select a picture card from the cards provided by the teacher. In your own words explain the uses of the pot or pan pictured on the card. Look at the display of pots and pans and corresponding numbers the teacher has arranged. Each pot or pan has its own number. Write down the number of the correct pot or pan as the teacher reads the uses aloud. To check answers the teacher will again read the uses of the pots and pans. Students take turns in answering. Select the utensil corresponding		

POTS AND PANS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		to the number your answer indicates. Identify the utensil for the class.		
	Give examples of safe procedures for use and care of pots and pans in food service	Divide into teams of two. Prepare posters to illustrate the safe use and care of a pot or pan. Each team will explain its poster to the class. Read or listen to stories of actual experiences about accidents involving pots and pans. Suggest safety procedures that should have been followed.		
Proper use and care of pots and pans aids in performance and lasting service.	Describe uses for specific pots and pans	Watch a demonstration by the teacher to learn safety procedures for the use and care of pots and pans. How should the handles of pots and pans be placed on the stove? What is a safety procedure to follow when using a pot holder? How should you remove the lids from pots and pans? Why is grease splashing on a hot surface dangerous? What is the proper procedure for cleaning pots and pans? Ask different students to give an oral report on the safe use and care of one pot or pan available in the food service lab.		

POTS AND PANS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Cite proper storage of pots and pans in food service	Listen to an illustrated talk on the correct storage of pots and pans. Locate storage areas in the food service lab. Visit kitchens of at least two food service facilities and look at the storage areas in each. What are the differences between kitchens in methods of storing pots and pans? What similarities in the storage of pots and pans did you notice? Check over the list from the city health department to see if storage in the food service lab is correct according to their rules. Why does the city health department have rules for storage of pots and pans?		
	Give examples of proper storage of pots and pans	Divide into small groups. Each group presents a skit showing examples and results of improper storage of pots and pans. After the skit is presented, classmates give the proper storage procedure.		
	Display continuing desire to use, store, and care for pots and pans in a safe manner	Return pots and pans to proper storage area after use. Observe safe procedures for use and care of pots and pans in the food service lab.		

TRADE VOCABULARY

- braiser pan
- tube cake pan
- pie pan
- saute pan
- square or rectangular steam table pans
- dish pan
- copper
- bake pan
- muffin or cupcake pan
- sauce pot
- round steam table pans
- double boiler
- aluminum
- layer cake pan
- sheet or bun pan
- pizza pan
- sauce pan
- roasting pan
- stock pot
- steel skillet
- stainless steel

HAND UTENSILS

COMPETENCIES The student will be able to:

identify hand utensils commonly found in food service.
state uses of hand utensils.
practice use of hand utensils.
relate hand utensil to assigned tasks.
perform assigned task using hand utensil efficiently.
state safe procedures for use and care of the hand utensils used in food service.
give examples of safe use and care procedures for hand utensils used in food service.
attempt useful description of the safe use and care procedures of hand utensils used in food service.
attempt to safely use and care for hand utensils found in food service.
choose safe procedures in use and care of hand utensils.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Hand utensils are used to perform a variety of tasks, expecially preparation and serving, in quantity food production.	Identify hand utensils commonly found in food service	View transparencies to learn the identity of hand utensils. Repeat the name of each utensil as the teacher points it out on the transparency. Draw a card from the cards provided by the teacher. The words on the card will correspond with a hand utensil. Locate the hand utensil named on the card. Make a display by placing the utensil and its name card on a table indicated by the teacher. Study the display of utensils and name cards to learn the identity of hand utensils.		

HAND UTENSILS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	State uses of hand utensils	Watch demonstrations by the instructor on the proper use of hand utensils. Explain the uses of each hand utensil as the teacher holds up the utensil. Divide into groups of four to study the uses of each hand utensil pictured on the cards provided by the teacher. (Teacher provides groups with 3 x 5 flash cards showing pictures of utensils on one side and the use on the other side. The cards are different for each group.) Groups exchange cards to study so individuals can learn the uses of all the hand utensils.		
	Practice use of hand utensils	Divide into two groups for a game identifying the hand utensils used in food service. Each team selects a team name and a captain. The two teams are seated facing each other and the team members answer in turn. Alternate questions, giving the team a point for a correct answer and penalizing each team two points for a member answering out of turn or cheating. A wrong or unanswered question by one team is then given to the other team to answer. (Teacher decides end of game in advance.		

HAND UTENSILS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Depending on class size, the game could end when one team scores 20 points or when each team member has had three or four turns.) Play "What's in the Bag?" to learn the identity of hand utensils used in food service. The teacher places hand utensils in paper bags and places them on a nearby table. (In choosing hand utensils for the game the teacher should keep in mind the safety of the student.) Players stand in a circle. One member is chosen to be "it" and stands outside the circle. The player who is "it" chooses a sack from the table, walks around the circle, stops in front of a member of the circle, and hands the sack to the person. The person in the circle is blindfolded, then removes the utensil from the sack and identifies the utensil by feeling rather than seeing. Only one answer can be given to identify the utensil. When a correct answer is given, the player in the circle exchanges places with the player who is "it" and play continues. When the answer given is wrong the utensil is placed in the sack and returned to the table, and the person who is "it" must choose another sack and another person in the circle. Play continues		

HAND UTENSILS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		until all hand utensils in the sacks have been correctly identified. Choose a hand utensil from the display arranged by the teacher. Identify the utensil and give a demonstration on the use of the hand utensil in food preparation.		
The ability to select the piece of equipment suited to a specific task is necessary in food service employment.	Relate hand utensil to assigned tasks	View transparencies of various tasks in food services. Identify the appropriate hand utensil that should be used for the task. Explain your choice to the class. Write your name beside one of the assigned tasks the teacher has listed on the chalkboard. Locate, in the lab, the appropriate hand utensil for the task. When the teacher calls the name of the task, explain to the class why you have chosen the hand utensil for this particular task.		
	Perform assigned task using hand utensil efficiently	Draw a card from the cards provided by the teacher. The number on the card will correspond with the numbered tasks written on the chalkboard. Select the appropriate hand utensil for the task and perform the task using the safe procedures.		

HAND UTENSILS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Work in small groups. Volunteer to do one of the tasks listed on the chalkboard. Locate the correct hand utensils for your task. Perform your task using the correct hand utensils. Follow the safe procedures for use and care of the hand utensils. (Teacher will provide a list of tasks that utilize use of several of the hand utensils. Types of tasks might include making the following: jello, pie crust, pie filling, or meringue.)		
Following the proper procedures for the use and care of hand utensils increases their life and contributes to the safety and sanitation of the operation.	State safe procedures for use and care of the hand utensils used in food service	Watch a demonstration by the instructor on the proper use and care of the hand utensils used in food service. After watching the demonstration, list at least five hand utensils used in food preparation. Answer the following questions about the hand utensils you have listed: What procedures should you follow in the care of these pieces of equipment? What safety precautions should you observe as you use or clean these pieces of equipment?		
	Give examples of safe use and care procedures for hand utensils used in food service	Describe use and care procedures for specific hand utensils. Let classmates decide if the procedure described is correct or incorrect.		

HAND UTENSILS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Attempt useful description of the safe use and care procedures of hand utensils used in food service	Draw a card for your assignment. (Teacher provides the class with cards stating the name of a hand utensil found in food service.) Locate the hand utensil named on your card. Explain in your own words how to safely use and care for the hand utensil that is named on the card. Tell where the utensil should be stored. Participate in a game of "Scavenger Hunt" to learn the safe procedure for use and care of hand utensils used in food service. Divide into two teams. The teacher gives each team a list of hand utensils to locate in the food service lab during a certain period of time. Identify the safe use and care as well as the names of the hand utensils. The first team to complete the assignment in the allotted time is the winner.		
	Attempt to safely use and care for hand utensils found in food service	Select a hand utensil used in food service. Identify the hand utensil and give a demonstration of its safe use and care. Let teacher and classmates suggest ways to improve.		

HAND UTENSILS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Choose safe procedures in use and care of hand utensils	Divide into small groups. Each group brainstorm on the importance of using safe procedures in using and caring for hand utensils in food service. Participate in a group discussion on the following topics: (1) Following safe procedures for use and care of hand utensils increases their life span. (2) Following safe procedures for use and care of hand utensils contributes to the overall safety and sanitation of a food service operation. Observe the safe procedure for the use and care of hand utensils in the food service lab. Follow the safe procedure in using and caring for the hand utensils.		

TRADE VOCABULARY

mixing bowls
mixing spoons
solid, pierced, and slotted spoons
wooden spoon
ladle
dipper
rotary beater
wire wisk beater
spatula
turner
bowl scraper
narrow blade spatula

china cap
wide blade spatula
spreader
hamburger turner
spatula turner
sandwich spreader
food tongs
funnel
strainer
flour sieve
shaker
pastry board
individual gelatin molds

box grater
colander
dough blender
rolling pin
pastry wheel
pastry brush
vegetable brush
pat brush
candy and frying thermometers
meat and oven thermometers
timer
cooling racks
bench brush

SERVING EQUIPMENT

COMPETENCIES The student will be able to:

identify serving utensils used in food service.
state the uses of serving utensils in food service.
state procedures for the care of serving utensils.
identify condiment containers and dispensers used in food service.
state the use of condiment containers and dispensers used in food service.
state procedures for the care of condiment containers and dispensers.
practice the proper care of condiment containers and dispensers.
identify beverage containers used in food service.
state procedures for use and care of the beverage containers used in food service.
practice the correct procedure for using beverage containers.
identify trays and carts used in food service.
cite the uses of trays and carts in food service.
describe uses for trays and carts in food service.
state procedures for the safe care of trays and carts used in food service.
attempt to use a tray or cart safely and efficiently.
identify tableware used in food service.
cite the uses of tableware in food service.
state safe procedures for care of tableware.
state proper procedures for handling tableware.
practice handling tableware in a safe, sanitary manner.
relate the correct serving equipment to a task.
perform a specific task using the correct serving equipment.
display desire to follow correct procedures for using service equipment in food service.

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Serving equipment is designed for specific uses.	Identify serving utensils used in food service	Watch a demonstration to learn the identity of serving utensils used in food service. Name each serving utensil as the teacher holds it up. Study a display of serving utensils arranged by the teacher. Repeat the name of the serving utensil as the teacher points it out. Select the serving utensils from a display of various types of equipment used in food service and explain their uses to the class.		
	State the uses of serving utensils in food service	Watch a demonstration to learn the correct uses of serving utensils. What is a scoop used for? A ladle? Explain the use of each serving utensil as the teacher points out the equipment. Name the correct serving utensil for serving each food as the teacher shows pictures of food items.		

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Correct procedures for the use and care of serving equipment will increase its life and promote sanitary conditions.	State procedures for the care of serving utensils	Watch a demonstration on the care of serving utensils. Why should the ice cream dipper be washed when you change flavor of the ice cream you are dipping? Why is it important to keep serving utensils in the correct storage place? Why is it important to keep serving utensils clean?		
	Identify condiment containers and dispensers used in food service	View transparencies to learn the identity of condiment containers and dispensers used in food service. Explain what is meant by the word "condiment." Name some condiments. Name each container as the teacher points it out on the transparency. Locate a condiment container or a dispenser in the food service lab. Identify the container.		
	State the use of condiment containers and dispensers used in food service	Watch a demonstration to learn the uses of condiment containers and dispensers. What is the difference in a straw dispenser and a toothpick dispenser? Select a condiment container or a dispenser from the display and explain the use of it to the class.		

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Select a picture card and choose the correct condiment or dispenser for the item named on a card.		
	State procedures for the care of condiment containers and dispensers	Watch a demonstration on the care of condiment containers and dispensers. Why is it important that condiments be kept in clean containers? When should you refill sugar bowls? Why should you check inside the sugar bowl for lumps? How often should sugar dispensers and sugar bowls be emptied and washed? How do you clean the spout of the creamer? When should you refill salt and pepper shakers? Sometimes the holes in the shaker become clogged; how do you open the holes? What aids in keeping salt and sugar dry in the containers?		
	Practice the proper care of condiment containers and dispensers	Demonstrate the correct way to fill a sugar bowl. Why should you use a large pitcher filled with sugar to fill the bowl? Show the correct procedure for cleaning salt and pepper shakers. After washing and drying the shaker, why should the shaker be turned upside down and placed on a towel?		

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Demonstrate the correct way to put catsup and mustard from large containers into small bowls for table use. Which serving utensil should be used in the process? Why should you remove silver spoons from containers of mustard and mayonnaise?		
	Identify beverage containers used in food service	Study picture cards to learn the identity of beverage containers used in food service. Name the item as the teacher flashes a picture card.		
	State procedures for use and care of the beverage containers used in food service	Watch a demonstration to learn the correct use and care of beverage containers in food service. If the punch bowl is china or glass why is it important to check that the bowl is not warm before cold punch is added? How should you avoid cracking a punch bowl with sudden change in temperature? How should you keep a ladle from dripping? How should you refill the punch bowl at the table?		
		Watch a demonstration to learn the correct use and care of a pitcher in food service. Explain how you use a napkin to keep the pitcher from dripping? What is the purpose of the ice lip on the pitcher? How do you support a		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		pitcher that is heavy when filled with ice? What utensil is used in handling ice cubes? Cracked ice?		
	Practice the correct procedure for using beverage containers	Demonstrate the correct procedure for serving punch from the punch bowl using a punch ladle.		
		Demonstrate the correct procedure for filling a water glass from a pitcher. How full should you fill a water glass?		
	Identify trays and carts used in food service	View transparencies to learn the identity of trays and carts used in food service. Compare the carts and trays in the food service lab with the ones pictured on the transparencies. What is the difference in the portable hot food server and the portable cold food server? Name the equipment as the teacher points it out.		
		Select a picture card and identify the tray or cart pictured on the card. What is the difference in a utility cart and a holding cart? What is the purpose of a side-service stand?		

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Cite the uses of trays and carts in food service	Watch a demonstration to learn the correct use of trays and carts in food service. When should a tray be used?		
	Describe uses for tray and carts in food service	Explain the use of one of the trays or carts. What items are kept on the side-service stand? What is the best way to move a cart? Explain the techniques that will add to your efficiency and safety in loading a tray. Where should you place the heavier pieces? How should you carry the tray?		
	State procedures for the safe care of trays and carts used in food service	Study a handout on food service safety when using a tray. How should you place dishes and containers on a tray to avoid overloading the tray? How should you clean a cart? Explain how to clean a serving tray. Why should you make sure a tray is dry before using it?		
	Attempt to use a tray or cart safely and efficiently	Demonstrate the correct technique to use in loading a tray. Demonstrate safe procedures for lifting, carrying, and setting down a tray.		

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Demonstrate the correct way to move a cart.		
	Identify tableware used in food service	View transparencies to learn the identity of tableware used in food service. Name the tableware as the teacher points it out on the transparency.		
		View a display of labeled pieces of tableware. What is the difference between a saucer and a bread-and-butter plate? A salad fork? A dinner fork, and a serving fork? A water glass and another beverage glass?		
		Name the tableware as the teacher flashes a card with its picture on it.		
		Select one piece of tableware from the display arranged by the teacher. Identify the tableware.		
		Draw a slip of paper with the name of a piece of tableware on it. Find a picture of the specified tableware.		
	Cite the uses of tableware in food service.	Watch a demonstration to learn the uses of tableware in food service. Explain the use of four items of dinnerware; four items of flat ware; four items of glassware.		

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Draw a number. Locate the corresponding numbered tableware displayed. Identify the tableware and explain its use.		
		Match picture cards of food items with the correct tableware used in serving them.		
	State safe procedures for care of tableware	View a filmstrip to learn the correct care of tableware. If it is suspected that there is broken glass or dishware in soapy water, how should broken pieces be removed? Why shouldn't knives be placed in soapy water? Why should glassware of all kinds be inverted after being washed? How should you clean up broken glass or china? What should you do with a dish or glass that is chipped or cracked?		
	State proper procedures for handling tableware	Watch a demonstration to learn safe procedure for handling tableware. How do you hold cups? Glasses? How should you grip flatware? How do you hold plates and platters?		
	Practice handling tableware in a safe, sanitary manner	Demonstrate the safe, sanitary techniques for handling cups, glasses, flatware, plates, and platters. Let teacher and classmates offer suggestions for improvement.		

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The food service employee must have the ability to choose the correct piece of serving equipment.	Relate the correct serving equipment to a task	Draw a card and select the serving equipment needed for the task named on the card. Explain your decision to the class. Play "bingo" to relate serving equipment to tasks. Place a marker on the correct name of the serving equipment as the teacher reads a task to be performed. Match up serving equipment and specific tasks on picture cards.		
	Perform a specific task using the correct serving equipment	Perform an assigned task using the correct serving equipment. Follow the appropriate safety procedure and demonstrate the correct technique in performing the assignment. (Assignments might include serving specific food items that require various pieces of serving equipment, loading a tray, carrying a tray, and moving a cart.) Use appropriate serving equipment for assigned tasks each time food is served in the food service laboratory.		

SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Display desire to follow correct procedures for using service equipment in food service	Make an effort to select correct serving equipment for food items in the food service lab. If you do not know what equipment to use ask your teacher. Handle serving equipment in a safe, sanitary manner without being reminded.		

387

386

TRADE VOCABULARY

condiment containers and dispensers

salt and pepper shakers

sugar bowl and creamer

syrup pitcher

vinegar and oil cruet

salad dressing dispenser

napkin dispenser

toothpick dispenser

glassware

water glass

tea glass

juice glass

sherbert dish

ice cream dish

beverage containers

pitcher

punch bowl

punch cup

punch ladle

trays and carts

compartment or serving tray

utility cart

portable hot food server

ice maker with water filler

silverware container

holding cart

side service stand

flatware

dinner knife

butter knife

dinner fork

salad fork

teaspoon

iced tea spoon

serving utensils

serving spoon

serving fork

tongs

dipper type ladle

flat ladle

scoop

ice cream dipper

pie marker

pie server

dinnerware

dinner plate

bread-and-butter plate

salad plate

salad bowl

soup bowl

fruit dish

dessert dish

cup

saucer

SMALL CLEANING EQUIPMENT

COMPETENCIES The student will be able to:

identify small cleaning equipment.
list the uses of small cleaning equipment.
state the procedures for the care of small cleaning equipment.
describe the care of the pot brush, scrub brush, and wire brush.
summarize the uses of a pot brush, scrub brush, and wire brush.
interpret the care of upright and push brooms.
describe the use of the upright broom and the push broom.
explain the correct method of sweeping with a push broom.
attempt to use the correct method of sweeping with a push broom.
describe the care of the dust mop.
describe the use of the dust mop.
give examples of the care needed for the wet mop.
describe the use of the wet mop.
explain the correct way to use a dust mop or a wet mop.
attempt to use the correct procedure for mopping.
describe the care of the mop wringer.
describe the uses of the mop wringer.
state safe procedures for using small cleaning equipment.
describe the safety procedures in using small cleaning equipment.
practice using small cleaning equipment.
perform a specific task with small cleaning equipment.
display a desire to use small cleaning equipment in a safe and efficient manner.

SMALL CLEANING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Cleaning equipment designed for specific jobs helps promote the safe and sanitary conditions that are necessary in food service.	Identify small cleaning equipment	View transparencies to learn the identity of small cleaning equipment. Name the equipment as the teacher points it out on the transparency. Select a card naming a piece of small cleaning equipment. Point out the equipment in the transparency and identify the item. Study a display of small cleaning equipment. Identify each piece of equipment.		
	List the uses of small cleaning equipment	Watch a demonstration to learn the uses of small cleaning equipment. Why is it important to use the correct cleaning equipment for specific tasks? When is a bucket used in cleaning? A laundry basket? Name the use of specific cleaning equipment as the teacher points to the equipment. Select a piece of cleaning equipment from a display and explain its uses.		
	State the procedures for the care of small cleaning equipment	Watch a demonstration on the care of small cleaning equipment. Why is it important to take good care of the cleaning equipment?		

SMALL CLEANING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe the care of the pot brush, scrub brush, and wire brush	Describe the care of the pot brush, scrub brush, and wire brush in your own words. When speaking of a brush, what is meant by block? Fiber set? Bristles? How should the brushes be stored when not in use? What is meant by combing the brushes? Why should the brushes be combed weekly? Why should the brushes be inspected for loose wires and loose bristles? How do you clean very soiled brushes? Why shouldn't the brushes be used for dust removal?		
	Summarize the uses of a pot brush, scrub brush, and wire brush	Depict the uses of a pot brush, scrub brush, and wire brush in cartoon drawings.		
	Interpret the care of upright and push brooms	Explain the care of the upright broom. How should the upright broom be stored? Why shouldn't the upright broom be allowed to rest on the straws? How do you clean upright brooms? Summarize the care of the push broom. Why should the broom handle be rotated in the block frequently? Why shouldn't you lean on the handle to rest? Why shouldn't the push broom rest on its fibers? Why should the push		

SMALL CLEANING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		broom be combed weekly? How do you clean a very soiled push broom? How should the push broom be stored?		
	Describe the use of the upright broom and the push broom	Explain the uses of an upright broom. Name three cleaning situations when it is best to use the upright broom. Why should you avoid using the upright broom where dust will be raised?		
		Give examples of uses for a push broom. When should the push broom be used? Why shouldn't the push broom be used for the cleaning of resilient floors or any type of floors in administrative, medical, or dietary areas? Why is the amount of dust raised a concern in these situations?		
	Explain the correct method of sweeping with a push broom	Watch a demonstration to learn the correct method of sweeping with a push broom. Why should the use of short strokes be avoided? What is the proper length for a stroke with a push broom? Why shouldn't you flip the push broom at the end of each stroke? Explain the correct method of sweeping with a push broom.		

SMALL CLEANING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Attempt to use the correct method of sweeping with a push broom	Demonstrate the correct method of sweeping with a push broom. How should you hold your back? How far apart should your feet be? How should body weight be swung as the stroke is made with the push broom?		
	Describe the care of the dust mop	Explain the care of the dust mop. How should you apply a treatment to the dust mop? How should you launder the soiled dust mop? Where should dust mops be stored? Why should dust mops be stored with the heads down? How do you shake out a dust mop?		
	Describe the use of the dust mop	Name the uses of the dust mop in your own words. What is the basic purpose of the dust mop? Why shouldn't you use a dust mop on wet or oily floors? Why shouldn't you lift the dust mop from the floor unnecessarily?		
	Give examples of the care needed for the wet mop	Summarize the care of wet mops. When speaking of a mop what is meant by a mop head? Mop holder? Mop wringer? Why should a new mop be soaked in warm water for 20 minutes? Why should the mop be turned from one side to the other frequently while in use? Although mops should be squeezed or pressed to remove water, why shouldn't you scrub with the part of the		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		mop closest to the holder? Why should you avoid using mops with lye caustics or strong undiluted cleaning solutions? How should you mop a rough surface? How should you clean a mop?		
		How should you store a mop? Why shouldn't wet mops touch each other or come in contact with walls or equipment? What should you do about mop strands that become loosened? How often should a mop be washed?		
	Describe the use of the wet mop	Explain when the wet mop is used. What is the basic purpose of the wet mop?		
	Explain the correct way to use a dust mop or a wet mop	Watch a demonstration to learn the correct method of using a mop. Why shouldn't you bear down on the mop? Explain the correct procedures for mopping.		
	Attempt to use the correct procedure for mopping	Demonstrate the correct method of mopping with either a dust mop or a wet mop. Why should you keep your back straight and avoid overreaching when using the mop? When mopping, why should you bend at the hips?		

SMALL CLEANING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Sanitation and long lasting equipment result from the proper use and care given to them.	Describe the care of the mop wringer	Explain the care of the mop wringer. Why is it important to keep the working parts properly oiled? Why should you keep screws and bolts tightened on the mop wringer? How often should you clean the mop wringer?		
	Describe the uses of the mop wringer	Explain the uses of the mop wringer. Does the mop wringer "wring" or "squeeze" the mop? Explain your answer.		
	State safe procedures for using small cleaning equipment	Study posters from the National Safety Council to learn safety in using cleaning equipment. In your own words explain the safe procedures.		
	Describe the safety procedures in using small cleaning equipment	Explain the safety procedures in using small cleaning equipment. Why is it important to watch how you carry your equipment, mops, and brooms? In cleaning stairs, why is it important to watch where the buckets and equipment are placed? Why should you use "Wet Floor" caution signs whenever floors are being wet cleaned? Why should floors be dry cleaned regularly?		

SMALL CLEANING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Practice using small cleaning equipment	Practice using small cleaning equipment in the food service lab. Rotate so all class members use each piece of cleaning equipment.		
	Perform a specific task with small cleaning equipment	Perform specific tasks using small cleaning equipment. [Tasks might include using a push broom (storage, reversing the block, combing, proper handling); using a wet mop and wringer (storage, trimming the strands, method of use, washing the mop and wringer); using brushes (storage, combing, proper use); and using a dust mop (storage, treating the dust mop, proper method of use).] Use small cleaning equipment as needed in the food service lab. Perform various tasks when it is your turn. Use the appropriate cleaning equipment for specific tasks in the food service lab following directions for its use.		
	Display a desire to use small cleaning equipment in a safe and efficient manner	Take proper care of small cleaning equipment without being reminded. Observe safety procedures when using small cleaning equipment.		

402

403

TRADE VOCABULARY

push broom

upright broom

pot brush

scrub brush

wire brush

block

fiber set

bristles

mop head

mop holder

mop wringer

wet mop

dust mop

bucket

laundry basket

resilient

LINENS

COMPETENCIES The student will be able to:

identify linens used in food service.
state uses of linens in food service.
state the correct procedure for care of linens.
attempt to use the correct procedure in removing stains from linen.
use the correct procedure to remove a specific stain from linen.
state the correct procedure for laying a tablecloth.
describe the procedure for laying a tablecloth.
attempt to use the correct procedure for laying a tablecloth.
state the correct procedure for folding and using napkins in food service.
describe how to fold a napkin.
practice folding a napkin using the correct method.
practice decorative folds for napkins.
describe how to fill a dispenser with paper napkins.
practice filling dispensers with paper napkins.
display a desire to use and care for linens correctly.
perform a specific task correctly using the appropriate linens.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Clean and attractive linens promote sanitation.	Identify linens used in food service	View transparencies to learn the identity of linens used in food service. Name each linen as the teacher points it out on the transparency. Name each type linen as the teacher points is out in the food service lab.		

405

406

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Make a poster to show linens used in food service. Illustrate with a picture and identify tablecloth, place mat, napkin, dish cloth, and dish towel.		
		Match up flash cards of linens with their correct names.		
	State uses of linens in food service	Watch a demonstration by the teacher to learn the correct use of linens in food service. What is the difference in a dish cloth and a dish towel? A tablecloth and a place mat? What is a silence pad? Where is the place mat placed on the table? Which piece of linen is used to wipe off the table?		
		Select a linen article from a display and explain its use and care to the class.		
Following the correct use and care procedures for linens will extend their life.	State the correct procedure for care of linens	Visit a food service institution to learn the proper care of linens. What is the purpose of a linen closet or a linen room? Why should linen be stored on well ventilated shelves? Why is it important to rotate linens? What is meant by misuse of linens?		

LINENS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Explain the proper care of linens. Why should stained linens be spot cleaned or bleached before being laundered with other linens? How may spilled sugar damage a tablecloth?		
		Watch a demonstration on removal of stains from linens. Why should the stain be cleaned as soon as possible? Explain the general rule for removing stains.		
	Attempt to use the correct procedure in removing stains from linen	Remove a stain from a cloth, using the correct procedures. Small cloths provided should be stained with coffee, grease, and food stains.		
	Use the correct procedure to remove a specific stain from linen	Select a stained cloth with a label describing the stain. Use the correct procedure to remove the stain.		
	State the correct procedure for laying a tablecloth	Watch a demonstration to learn the correct procedure for laying a tablecloth. What is the guide for centering the cloth on the table?		

LINENS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe the procedure for laying a tablecloth	Explain in your own words the method for laying a tablecloth.		
	Attempt to use the correct procedure for laying a tablecloth	Demonstrate the correct procedure for laying a tablecloth. Let the teacher and classmates suggest ways to improve.		
	State the correct procedure for folding and using napkins in food service	Watch a demonstration to learn the correct procedure for folding and using napkins in food service. Name one of the decorative folds that some restaurants use. Where should the flap side of the napkin be placed?		
	Describe how to fold a napkin	Explain the correct procedure for folding a napkin by putting drawings of each step in the correct order.		
	Practice folding a napkin using the correct method	Demonstrate the correct procedure for folding a napkin. Let the teacher and classmates suggest ways to improve.		
	Practice decorative folds for napkins	Select a card and demonstrate a decorative fold for a napkin. (Decorative folds might include the fish, roll in a glass, two tips, diagonal roll, flat fold, four flaps, and the		

LINENS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		candle.) Why is it important to fold napkins according to the preference of the restaurant where you are employed?		
	Describe how to fill a dispenser with paper napkins	Watch a demonstration to learn the correct procedure for filling a dispenser with paper napkins. Why shouldn't paper napkins be folded? Explain the correct procefure for filling the dispenser with paper napkins.		
	Practice filling dispensers with paper napkins	Demonstrate the correct procedure for filling a dispenser with paper napkins.		
	Display a desire to use and care for linens correctly	Use without being told the correct linens for specific tasks in the food service lab. Check linens voluntarily for stains. Follow correct procedures for stained items. Use correct technique for folding napkins and laying tablecloths.		

LINENS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
If the proper linens are selected, the atmosphere will be appropriate and the customer will be satisfied.	Perform a specific task using the appropriate linens	Select an assignment card. With the appropriate linen, perform the assignment in an efficient manner. (Assignments may include laying a tablecloth, folding a napkin, wiping off the table, arranging place mats on table, and filling napkin dispensers.)		

TRADE VOCABULARY

linens

tablecloth

place mat

napkins

dish cloth

dish towel

undercloth

silence pad

linen closet

linen room

stain

DECORATING EQUIPMENT

COMPETENCIES The student will be able to:

identify decorating equipment used in food service.
state procedures for the care of decorating equipment.
state the uses of decorating equipment.
attempt to use the pastry bag and pastry tube.
perform specific tasks with the pastry bag and pastry tube.
state the use of a paper cone.
practice making a paper cone.
attempt decorating with the paper cone.
perform a specific task with the paper cone.
display a continuing desire to decorate food items in an attractive and neat manner.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Decorating equipment is used to make foods more attractive and appealing.	Identify decorating equipment used in food service	Watch a demonstration by the teacher to learn the identity of decorating equipment. What is the difference in a pastry bag and a pastry tube? Name three designs of the pastry tube. Name each piece of decorating equipment as the teacher points it out in the foods lab.		
	State procedures for the care of decorating equipment	Watch a demonstration by the teacher for caring for decorating equipment. In your own words, explain the care of the pastry bag and tube.		

DECORATING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	State the uses of decorating equipment	Take a field trip to a bakery to watch a demonstration on the uses of decorating equipment. When filling a pastry bag, why is it important that no air be captured in the icing? For what is the pastry bag used?		
		Watch a demonstration by the teacher on using the pastry bag to make cookies. Which tubes are used for cookies? How is the hand positioned to hold the pastry bag for filling?		
The neater the decoration, the more attractive the cake or pastry.	Attempt to use the pastry bag and pastry tube	Fill the pastry bag with a soft cookie batter. Press the batter out of the tube to make cookies. Space the cookies about one inch apart to allow for spreading. Keep the cookies uniform in size and shape.		
	Perform specific tasks with the pastry bag and pastry tube	Select the correct pastry tube for the cookie design on the assignment card. Fill the pastry bag and press the batter out of the tube to make cookies the shape of the design.		
	State the use of a paper cone	Watch a demonstration by the teacher on making and using a paper cone as a pastry bag. Notice the different methods of cutting the point of the cone to form various designs.		

DECORATING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		What type of paper is used for the cone? For what is the paper cone used?		
	Practice making a paper cone	Cut the parchment paper into triangles, then practice making them into paper cones. Roll them so that the point of the cone is closed. Make four cones and place them one inside the other. The paper cones will be used later in the foods lab.		
		Give a demonstration showing how to make a paper cone for decorating. Let teacher and classmates suggest ways to improve.		
	Attempt decorating with the paper cone	Fill a paper cone with buttercream frosting. Decorate the back of a baking pan or layer pan, pretending it is the top of a layer cake. Practice making a border design. Practice making an inscription such as "Happy Birthday." Scrape the frosting from the practice pan and return it to the bowl. Use it again for practice.		
		Fill a paper cone with buttercream frosting. Cut the point of the cone to make a rosebud tube. Practice making rosebuds on the back of the layer pan.		

DECORATING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Fill a paper cone with buttercream frosting. Cut the point of the cone to make a leaf tube. Practice making the leaf design on the back of the layer pan.		
		Practice decorating a cake by using the paper cone and foam rubber forms. (Teacher provides foam rubber practice forms made from a sheet of 2 inch or 3 inch foam rubber available at fabric and upholstery shops. The foam is cut into the shapes of circles, squares, cupcakes, and hearts to simulate cakes.) Show the decorated cake form to the class. Wash the icing out of the foam and air dry the foam. The foam can be reused at later times.		
	Perform a specific task with the paper cone	Make a paper cone and cut the point according to the assigned design. Use the cone to decorate cupcakes with an appropriate design.		
		Use the paper cone to make rosebud and leaf designs. Place the designs on wax paper to dry and firm up. Choose the best designs to use as cake decorations.		
		Decorate a layer cake. Use the rosebud and leaf designs to decorate the cake. Add a		

DECORATING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To be a successful decorator, one must understand color combinations and have skill in frosting application.	Display a continuing desire to decorate food items in an attractive and neat manner	border design or an inscription to the cake using the paper cone. Place decorated cake on a display table for class to view. Take turns decorating cakes for teachers and principal on their birthdays. Surprise teachers who have summer birthdays with a cake on a holiday, such as Valentine's Day, St. Patrick's Day, Easter, and Halloween. Study picture cards of decorated food to learn attractive color combinations. Choose to practice to improve own decorating techniques when using food decorating equipment. NOTE TO TEACHER: An art enrichment activity would serve as a good opportunity for encouraging the developing talent of a young artist.		

TRADE VOCABULARY

frosting

icing

batter

pastry bag

decorating tubes

cookie press

foam practice form

parchment paper

paper cone

CAN OPENERS

COMPETENCIES The student will be able to:

identify commercial can openers.
identify the parts of commercial can openers.
state safe procedures for use and care of the commercial can openers.
attempt to safely use the commercial can opener.
operate the commercial can opener safely and efficiently.
display continued desire to properly operate and maintain the can opener.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The can opener, when used properly, can save a great deal of time and energy.	Identify commercial can openers	Look at picture cards to learn the identity of different types of commercial can openers. What are the differences in the types of can openers? Identify can openers found in the lab.		
	Identify the parts of commercial can openers	View a transparency to learn to identify the parts of the can opener. Identify the parts of the can opener as the teacher points it out on the transparency. What is the can opener used for? Explain, in your own words, the purpose of the handle, blade, shank, and base in the operation of the can opener.		
	State safe procedures for use and care of the commercial can openers	Watch a demonstration by the teacher of safe procedures for the use and care of commercial can openers. How do you remove and clean the shank? Why do you inspect the blade? How do you clean the base? What effect do the		

CAN OPENERS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		acids from fruits and vegetables have on the can opener?		
	Attempt to safely use the commercial can opener	Open a can with the commercial can opener using a safe procedure. (The teacher provides empty cans obtained from a food service institution.)		
	Operate the commercial can opener safely and efficiently	Perform assigned tasks operating the can opener as needed with safety and efficiency. Check for any food deposits remaining on the blade of the can opener.		
Safe procedures for the use and care of the can opener will increase its life and contribute to the safety and sanitation of the operation.	Display continued desire to properly operate and maintain the can opener	Wipe off the blade of the can opener with a damp cloth between each operation with different food products. Clean the can opener after daily usage. Inspect for cleanliness and for damage to blade that causes metal on cans to peel. Observe voluntarily the safe procedures for use and care of the can opener when working in the food service lab.		

TRADE VOCABULARY

handle

blade

electric can opener

shank

base

electric lever or arm

bench mounted

hand operated can opener

MAJOR EQUIPMENT

VI. Major Equipment for Food Production

Page

Synopsis 262

Performance Competencies 262

Beverage Equipment 263
- Coffee Urn
- Coffee Maker
- Tea Urn
- Cold Beverage Dispensing Machines
- Ice Maker Machine
- Trade Vocabulary

Cleaning and Disposal Equipment 273
- Identification and Location in Commercial Kitchen
- Commercial Dishwasher
- Disposal
- Pot and Pan Sink
- Trade Vocabulary

Mixing Equipment 283
- Mixer
- Blender
- Trade Vocabulary

Page

Surface Cooking Equipment 291
  Range Top
  Griddle
  Deep Fat Fryer
  Broiler
  Exhaust Hood
  Trade Vocabulary

Ovens 307
  Types and Parts
  Care and Safe Procedures
  Cleaning
  Trade Vocabulary

Steaming Equipment 313
  Steam Jacketed Kettle
  Steamer
  Trade Vocabulary

Cold Storage Equipment 321
  Refrigerators and Freezers
  Trade Vocabulary

Cutting Equipment 327
  Slicer
  Cutter or Chopper
  Trade Vocabulary

437

Page

Food Preparation Stations 333
- Salad Station
- Baker's Table
- Sandwich Station
- Trade Vocabulary

Holding and Serving Equipment 339
- Hot Food Equipment
- Cold Food Equipment
- Trade Vocabulary

Toasters 347
- Individual Toaster
- Conveyor Toaster
- Waffle Iron
- Trade Vocabulary

438

MAJOR EQUIPMENT FOR FOOD PRODUCTION

SYNOPSIS

A skilled and successful food service employee knows about general and specialized cooking equipment. Because food service equipment represents a large monetary investment, students who seek employment must be able to use and clean the equipment properly. Furthermore, students should be very familiar with the proper methods of maintaining this expensive equipment. If one follows these guidelines, one can expect smooth performance from the equipment for many years.

PERFORMANCE COMPETENCIES

The student will follow the correct procedures for the operation and care of major equipment.

The student will perform assigned tasks involving operation and care of major equipment.

The student will apply safety measures in the use and care of equipment.

The student will exhibit the use of safe procedures for use and maintenance of major equipment.

BEVERAGE EQUIPMENT

COMPETENCIES The student will be able to:

identify the coffee urn.
name the essential parts of the coffeemaker.
list safe and sanitary procedures for operating the coffeemaker.
give examples of safe and sanitary procedures for using the coffeemaker.
list procedures for thorough cleaning of the coffeemaker.
illustrate procedures for cleaning the coffeemaker.
carry out procedures for proper operation and cleaning of beverage equipment.
improve efficiency in operating the coffeemaker.
determine the condition in which the coffeemaker was stored.
identify the tea urn.
name the parts of the tea urn.
list procedures for using the tea urn properly.
describe the steps in using the tea urn.
carry out procedure for using the tea urn.
list the procedure for cleaning the tea urn.
illustrate the procedure for cleaning the tea urn.
practice cleaning the tea urn.
maintain the tea urn.
identify cold beverage dispensing machines.
list procedures for operating and cleaning cold beverage dispensers.
give examples of safe and sanitary procedures for operating cold beverage machines.
practice proper use and care procedures for using cold beverage equipment.
gain increased skill in operating the cold beverage equipment.
identify the ice maker machine.
list proper cleaning and use procedures for the ice maker machine.
describe proper cleaning and use procedures for the ice maker machine.
practice using and cleaning the ice maker using proper procedures.

BEVERAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To produce tasty tea or coffee one must know the following: how to operate coffee and tea machines, how to correctly clean the equipment, how to accurately measure the coffee or tea.	Identify the coffee urn	View pictures of the urn, automatic brewer, and vacuum coffeemaker. Name the type available in the lab. Select pictures of various coffeemakers from commercial equipment catalogs. Cut them out to make a poster. Label each type.		
	Name the essential parts of the coffeemaker	Using a mimeographed handout, label the major parts of the coffeemaker as the teacher identifies each. Examples: On and Off control, spout or spigot, heating elements, glass tube, and storage section. View a transparency of the model coffeemaker available in the food service lab. Name the parts as the teacher points to them.		
	List safe and sanitary procedures for operating the coffemaker	View a film or filmstrip on the operation of the coffeemaker. Note the following: If the coffeemaker is the type which requires the transfer of hot water from one portion of the urn to another, what precaution should be taken to prevent burns? Why is the cloth coffee filter bag soaked in warm water before filling it with ground coffee? Why must a constant temperature be maintained? Why should		

BEVERAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		the faucet be tagged with a warning when a cleaning solution is in the coffeemaker?		
	Give examples of safe and sanitary procedures for using the coffeemaker	Take part in a "magic circle" by naming a sanitary or safety precaution to use in operating and storing the coffeemaker. Examples: storing cloth filter bags for coffeemaker in cold water, unplugging coffeemaker if there is a spill over. Only those who can continue to name a precaution can remain in the circle.		
	List procedures for thorough cleaning of the coffeemaker	Observe procedures for cleaning coffeemakers between batches, at the end of the day, semiweekly. See the manual of instructions for your particular coffeemaker. Note: Are soaps, scouring powders, or abrasives ever used to clean coffee brewing equipment? What tool must be used to clean the gauge glass? Why is thorough rinsing important after cleaning a coffeemaker? Why is coffeemaker left half full of fresh water?		
		Observe snack bar workers as they clean and polish the beverage equipment.		

BEVERAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Illustrate procedures for cleaning the coffeemaker	Prepare a flip chart describing procedures to follow in cleaning the coffeemaker.		
	Carry out procedures for proper operation and cleaning of beverage equipment	Prepare coffee for classmates' "coffee breaks" or begin a daily coffee service for teachers, office workers, and custodians. Clean the equipment and have the teacher check your work.		
	Improve efficiency in operating the coffeemaker	Operate coffeemakers during labs and serve coffee according to a rotation chart. Make additional coffee when needed without being told by the teacher.		
	Determine the condition in which the coffeemaker was stored	Act as a supervisor and check the condition of the coffeemaker.		
	Identify the tea urn	View pictures of various types of tea urns. Name the type available in the food service lab.		
	Name the parts of the tea urn	View the tea urn as the teacher identifies each major part. Then name each part yourself.		

BEVERAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	List procedures for using the tea urn properly	Observe a demonstration by the teacher on the steps to follow in preparing tea in the urn. See section entitled Quantity Food Production: Beverages.		
	Describe the steps in using the tea urn	Explain to the class each step in preparing tea in quantity.		
	Carry out procedure for using the tea urn	Prepare brewed tea in the urn; prepare instant tea. Compare the time involved in each procedure and the flavor of both types of tea.		
	List the procedure for cleaning the tea urn	View a demonstration on procedures for cleaning the tea urn. Note the following: Why is the container flushed with clear water? What types of cleaner are used? Why must the faucet be dismantled and cleaned each time? Is the urn towel dried or air dried?		
	Illustrate the procedure for cleaning the tea urn	Prepare a flip chart indicating procedures to follow in cleaning the tea urn.		
	Practice cleaning the tea urn	Clean the urn after daily use; delime the urn each week. Ask the teacher to check your procedures.		

447

448

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Maintain the tea urn	Keep the urn fresh and free from deposits by cleaning after each use.		
Cold drink dispensers provide high volume delivery of carbonated beverages.	Identify cold beverage dispensing machines	View transparencies or pictures of cold beverage dispensing machines found in commercial food service equipment catalogs. Examples: milk dispensers, recirculating fruit juice dispensers; non-circulating fruit juice dispensers; soft ice cream and malt machines.		
Sanitation in beverage preparation and dispensing can be achieved only through an exact and detailed knowledge of the procedures for cleaning and operating beverage machines.	List procedures for operating and cleaning cold beverage dispensers	Visit a short order restaurant to observe the operation and cleaning procedures for the malt machine, soft ice cream machine and cold beverage dispenser. Note the following: Why is the proper cleaning so vital to the milk dispensing machine and soft ice cream and malt machines? Why are these machines sanitized before each day's use and at the end of the day? When juice dispensers are cleaned, why must the juice drained from the storage section be refrigerated? After the tanks of juice dispensers are cleaned with a cleaning solution, why must the tanks be rinsed and even the faucet and tubing rinsed? Is the drip tray removed for cleaning?		

BEVERAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Observe snack bar workers as they clean and polish the cold beverage equipment.		
		View a film on fountain operation. Review after the film to list the important procedures in operating the cold drink dispenser. Discuss the following: the amounts of syrup, carbonated water, and ice used; the method for filling the dispenser.		
	Give examples of safe and sanitary procedures for operating cold beverage machines	Role play food service workers who are portraying poor sanitary procedures. Examples: Drinking the remainder of a malt from the mixer container, drinking a coke while on the job dispensing beverages, licking fingers when a soft ice cream cone is over filled, putting hands in ice maker to get some ice to eat. Discuss how you would feel if you were a customer and observed such practices.		
	Practice proper use and care procedures for using cold beverage equipment	Operate, if possible, each variety of cold drink dispenser while on a field trip to a short order restaurant.		
		Operate the beverage machine in the snack bar of the school cafeteria using the supervision of the cafeteria worker.		

BEVERAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Gain increased skill in operating the cold beverage equipment	Operate the cold drink machine in school concession stands during ball games, school plays, etc.		
To prevent off flavor ice and to meet sanitary and safety standards, one must follow the correct procedures for using and cleaning the ice maker.	Identify the ice maker machine	View pictures of various models of ice makers. Identify the type located in the lab.		
	List proper cleaning and use procedures for the ice maker machine	Observe a demonstration by the teacher on the procedures for operating and cleaning the ice maker. Note the following: How often must the ice maker be defrosted, dismantled, and cleaned? Why is a bristle brush more effective in cleaning the ice maker than a sponge or cloth?		
	Describe proper cleaning and use procedures for the ice maker machine	Role play the part of an equipment salesman. Explain each step in operating and cleaning the ice maker. Volunteer to call the local health authorities to find out the defrosting regulation on ice makers in your city. Report your findings to class.		

BEVERAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Practice using and cleaning the ice maker using proper procedures	Turn on the ice maker prior to serving time. Clean the exterior of the ice maker after each lab. Defrost and clean when the teacher indicates it is necessary. Fill extra container with ice from the ice machine. Store in the freezer for use during peak serving periods.		

TRADE VOCABULARY

beverage
filter
grounds
deposits
drip grind
regular grind
fine grind
bitter
over extraction
film
tannin
caffein
carbon dioxide
syrup
cups
drink head

syrup containers
carbonater pump
dispense
drip tray
drink release
ice (cubes, crushed or chipped)
ice scoop
ice bucket
sanitizing solution
drain
spindle
speed switch
malt cup
cup adjuster
malt

spigot
shake
cone
soft ice cream
dipped
hopper or mix reservoir
On-Off switch
speed control switch
dispense
draw gate
lever
dasher
danger light
drip tray or bucket
sterilize

CLEANING AND DISPOSAL EQUIPMENT

COMPETENCIES The student will be able to:

- identify major cleaning equipment in a commercial kitchen.
- explain factors that influence location of cleaning equipment.
- cite the major parts of the commercial dishwasher and describe how it operates.
- state procedures for safe operation of the dishwasher.
- carry out the procedure for operation of the dishwasher under supervision.
- list procedure for cleaning the dishwashing machine.
- demonstrate the proper techniques for cleaning the dishwashing machine.
- determine the advantages of using a dishwashing machine instead of the hand method.
- examine dish rack loads for proper loading.
- improve ability to operate the dishwasher.
- cite proper procedure for operation of the disposal.
- illustrate safety measures for disposal use.
- adjust disposal for use.
- follow correct procedures for operating the disposal.
- determine measures to take in emergency situations.
- execute proper techniques for operating the disposal.
- name the parts of the pot and pan sink.
- explain the use of each section of the sink.
- cite steps in cleaning the pot and pan sink.
- explain the techniques for cleaning the pot and pan sink.
- practice proper techniques for using and cleaning the pot and pan sink.

CLEANING AND DISPOSAL EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Proper operation of dishwashing and warewashing equipment is vital to maintaining adequate sanitation standards in the food service establishment.	Identify major cleaning equipment in a commercial kitchen	View pictures or transparencies of the various commercial dishwashers. Note whether baskets or racks are used with each. Identify the type dishwashing machine available in the food service lab. View the disposal unit. How does it differ from a disposal unit installed in a home? Observe the pot sink. How does it differ from a regular sink? What tasks are performed at the pot sink? Is any food preparation ever done here?		
	Explain factors that influence location of cleaning equipment	View transparencies of layouts of commercial kitchen equipment. Point out the location of the dish machine, disposal, and pot sink in the food service lab. Illustrate the proper location of equipment by drawing lines on the transparency to indicate traffic patterns of the following: customers disposing of trays in cafeteria service, bus boys disposing of trays in regular service, employees scraping plates, cooks taking pots from serving area or food preparation area to pot sink.		

CLEANING AND DISPOSAL EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Discuss where the pot sink should be located. Note the weight of large pots and the heat from the range as well as from the hot water.		
	Cite the major parts of the commercial dishwasher and describe how it operates	Watch the operation of the commercial dishwasher as a cafeteria worker loads and operates it. Note the major parts of the dishwashing machine and how they operate.		
		View a film on the operation of a commercial dishwasher. Discuss the following points from the film: How does the dishwasher sanitize dishes? What type of detergent is used in the machine? Why are drying agents used. What things about the use of hot water are important to remember?		
		Label parts of dishwashing machine on mimeographed handouts.		
If the proper techniques are used in operation and care of dishwashing and warewashing equipment, it will give longer and more satisfactory service.	State procedures for safe operation of the dishwasher	Listen while a resource person, such as a cafeteria supervisor, gives a talk and demonstration on safety in the use of the dishwasher. Note how dishes are racked. What causes the water pressure to be too low? Name the three cycles of the dish machine. Note the precautions they felt important.		

CLEANING AND DISPOSAL EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Carry out the procedure for operation of the dishwasher under supervision	Work with a partner to rack dishes, add measured amount of detergent, and adjust controls. Work with a partner to load the machine and start the controls; remove the dish rack; inspect dishes for complete food removal; load dishes onto cart or tray and return them to their proper place of storage.		
	List procedures for cleaning the dishwashing machine	Watch a demonstration of the procedure to follow in cleaning the dishwasher located in the lab. Note the following information: Why is it important to turn the heater off before cleaning? Are the curtains cleaned while hanging or are they removed from the machine? Must the arms be removed for cleaning? What is the best tool for removing particles from the openings on the arms? What method is used for cleaning the scrap trays? How can the inside of the dishwasher be reached for cleaning? Why are the drain cap and overflow vent the last items to be cleaned?		

CLEANING AND DISPOSAL EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Demonstrate the proper techniques for cleaning the dishwashing machine	Choose from a group of cards one portion of the dishwashing machine to clean. The teacher will inspect each portion. Examples: curtains, wash and rinse arms, rinse jet pipes, scrap tray, drain, and overflow pipe. Prepare a step by step illustrated chart for cleaning the dishwashing machine. Hang the chart near the dishwashing machine.		
	Determine the advantages of using a dishwashing machine instead of the hand method	Take part in a lab where the total cleanup is done by hand. Time the lab. Prepare the same menu again, this time using the dishwasher to clean up. Time the lab; compare the time required for cleanup in the two labs. Show film on work simplification made possible by technology.		
	Examine dish rack loads for proper loading	Check sample loads and rate them according to the following points: overloaded, underloaded, water can reach all surfaces of dishes; dishes positioned so they won't hold water; silverware loaded in cylinders with handles down.		
	Improve ability to operate the dishwasher	Demonstrate operation of the dishwashing machine.		

CLEANING AND DISPOSAL EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Run the dishwasher during lab according to a rotating lab chart. Clean the dishwasher after each day's use.		
	Cite proper procedure for operation of the disposal	Watch a demonstration by the instructor on proper use of the commercial disposal and rinse sinks. Answer the following questions: What two factors are absolutely necessary for proper operation of the disposal? Why should the disposal be filled before starting the motor? Who is responsible for keeping the counter section clean? What waste items must not be put down the disposal?		
	Illustrate safety measures for disposal use	Prepare a chart listing safety rules or prepare comic posters to be displayed by the disposal each week.		
	Adjust disposal for use	Locate the cold water faucet and the switch for turning on the disposal.		
	Follow correct procedures for operating the disposal	Operate the disposal during food preparation. Ask the instructor about disposing of waste they are unsure about.		

CLEANING AND DISPOSAL EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Determine measures to take in emergency situations	Indicate what to do in the following situations: money falls into disposal, water is leaking from the seal, the disposal is jammed.		
	Execute proper techniques for operating the disposal	Maintain the disposal work station during lab without the aid of the instructor		
	Name the parts of the pot and pan sink	View a transparency of the pot and pan sink of the actual sink in the laboratory as the teacher labels each section.		
	Explain the use of each section of the sink	Listen to pot and pan washing procedures. Where are each of the following procedures done: soaking, washing, rinsing, sanitizing if there are two sinks, three sinks? How can the fill line be marked? What is the purpose of the booster heater?		
	Cite steps in cleaning the pot and pan sink	Watch a demonstration by the teacher on techniques for cutting grease buildup in the pot and pan sink, removing waste from the drain, and cleaning water spots from stainless steel.		

CLEANING AND DISPOSAL EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the techniques for cleaning the pot and pan sink	Role play the part of a food service supervisor who is explaining techniques in cleaning the pot and pan sink to a new employee.		
	Practice proper techniques for using and cleaning the pot and pan sink	Carry out the duties of the pot and pan washer during a regular lab. A student supervisor will check the sink for cleanliness when you are finished.		

TRADE VOCABULARY

tank
curtain
scrap tray
garbage disposal
soap dispenser
electrodes
wash arms
rinse jets
water fountain
splash trough and covers
drain
dish racks
dish detergent
water softener
presoak
power spray
overflow pipe

PARTS OF THE DISHWASHER

Wash arms--sprays soapy hot water over the dishes and utensils.

Rinse jets--sprays dishes with clear hot water to sanitize them.

Scrap tray--collects bits of food from the dishes and utensils.

Detergent reservoir--holds extra detergent which is added automatically to the wash water in some dishwashers.

Curtains--Keep the water from spraying outside the dishwasher.

Racks--hold the dishes and utensils.

Heater--heats water to high enough temperature (180-195°) for final rinse.

MIXING EQUIPMENT

COMPETENCIES The student will be able to:

- identify the mixer parts and attachments.
- state procedures for operating the mixer.
- cite uses for each mixer attachment.
- explain the purpose of each mixer attachment.
- attempt to place an attachment on the commercial mixer.
- cite safe procedures for use and care of mixer.
- exhibit use of safe procedures when using the mixer in lab.
- practice procedures for using the mixer.
- gain skill in using and caring for the commercial mixer.
- cite procedure for use and care of the blender.
- identify parts of the blender.
- state safe procedures for using the blender.
- explain safe techniques for use and care of the blender.
- practice safe procedures for operating and cleaning the blender.
- acquire additional skill in using the blender.
- adopt safe procedures for using the blender.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Commercial mixers mix, blend, or whip large quantities of ingredients in high volume cookery.	Identify the mixer parts and attachments	View a display of labeled mixer attachments and accessories. Identify the mixer attachments and accessories found on the information sheet. View transparency diagrams of mixer parts. See how many you can name to yourself.		

MIXING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Through the use of attachments, the commercial mixer can perform a wide variety of tasks.		View the operation of the mixer in the cafeteria as yeast dough, cake batter, or meringue is being made. Which attachments were used?		
	State procedures for operating the mixer	View a demonstration by the instructor of operating the mixer in the lab.		
	Cite uses for each mixer attachment	Observe demonstration uses for each attachment. Examples: Wire whip--frostings, whipped cream; flat beater--mashed potatoes; dough hook--bread or doughnuts; pastry knife--pie crust; food colander and soup strainer--soup and salad; food chopper--ham or chicken salads; shredder--cole slaw.		
	Explain the purpose of each mixer attachment	Reach into a box filled with mixer attachments. Draw one out and explain its uses to the class.		
	Attempt to place an attachment on the commercial mixer	Choose a strip of paper which names a mixer attachment. Use proper procedure for attaching the part and tell a use for the attachment.		

MIXING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
If used and cared for properly, mixers can be kept in good operating order and can produce superior food products.	Cite safe procedures for use and care of mixer	Observe the instructor disassembling the mixer for cleaning and replacement of attachments. What safe procedures are used in operating and caring for the mixer?		
	Exhibit use of safe procedures when using the mixer in lab	Divide into groups of three to name precautions you think should be observed while using a mixer. Compare this class list with one prepared on a chart by the teacher. Observe these precautions while using the mixer.		
	Practice procedures for using the mixer	Work with a partner, as para-professional teacher, supervises to prepare a mix using the commercial mixer. Prepare a commercial cupcake mix, cornbread mix, pancake batter, brownie mix, or doughnut mix following directions on the box.		
	Gain skill in using and caring for the commercial mixer	Use the mixer to prepare dry ingredients for brownies, pancake mix, or pie crust mix to be stored and used later. Develop skill in using the commercial mixer by preparing sweets from a coffee shop. Serve doughnuts prepared in the mixer and coffee. Classes later in the day may prepare brownies, cupcakes, or cake squares using the commercial mixer.		

MIXING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Act as an inspector and check the mixer and attachments thoroughly for cleanliness.		
Blenders, because they operate at high speeds, can cut, mix, and liquefy in seconds.	Cite procedure for use and care of the blender	Observe as a service representative from a power company demonstrates use of the blender. How many of the following can you name: parts of the blender, safety precautions, uses of various speeds, and procedures for cleaning the blender?		
	Identify parts of the blender	View a transparency with diagrams of blender parts and a listing of part names. Match the names of the parts of the blender by drawing lines from the parts to their name.		
		Divide into two teams to practice identifying parts of an actual blender. The first member of Team One attempts to identify the part of the blender pointed to by the teacher. If she/he responds incorrectly the first member of Team Two may try. Alternate questions and teams until each member has an opportunity to play. A correct answer earns one team point. Any student answering out of turn causes his team to forfeit one point. Parts of various pieces of commercial kitchen equipment may be used in the game.		

MIXING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
If used and cared for properly, blenders can be kept in good operating order and can produce superior food products.	State safe procedures for using the blender	Name the safety rules for using the blender taking turns in round robin style.		
	Explain safe techniques for use and care of the blender	Choose one of the following questions to explain to the class: How full may a blender be filled? How may ingredients be added when the blender is running? What are some of the jobs a blender can do? How should a blender be cleaned? How do you determine the speed to use in preparing various foods? How long should foods be blended? Describe in his/her own words the procedures for one of the following: (a) chopping nuts, (b) chopping ice, (c) chopping a vegetable, and (d) grating cheese. Brainstorm to describe accidents that might occur if safety rules are not followed when operating the blender.		
	Practice safe procedures for operating and cleaning the blender	Prepare with a partner a simple food item using the blender. Check on a checklist all the safety rules which are practiced. Have your instructor check the blender to see if it was properly cleaned and stored.		

MIXING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Acquire additional skill in using the blender	Prepare a blender food efficiently and serve to customers. Examples: dip, sandwich spread, dessert, or beverage. Ask customers to indicate whether the food is blended properly and whether it tastes appealing. Take turns using the blender as needed to prepare foods in the food service lab.		
	Adopt safe procedures for using the blender	Use without being reminded safe procedures when using the blender. Remind other students of safe procedures if unsafe procedures are observed.		

TRADE VOCABULARY

bowl

bowl support

beater shaft

bowl raising wheel or lever

gear or speed control

attachment socket

flat beater

dough hook

pastry knife

vegetable chopper

attachment

puree

liquefy

chop

grate

lid

base

jar

blades

cord

speed switcher

lid cap

gasket

blend

wire whip

SURFACE COOKING EQUIPMENT

COMPETENCIES The student will be able to:
identify types of range tops.
identify the major parts of the range top.
state safe procedures for use and care of the range top.
give examples of safe procedures for use and care of the range.
apply safe procedures for operation and care when using the range.
perform assigned task of operating a range.
identify the griddle and its uses.
label the parts of the griddle.
explain the parts of the griddle.
list safe procedures for use and care of the griddle.
describe safe procedures for use and care of the griddle.
operate the griddle using proper procedures for its operation and care.
perform assigned tasks using the griddle.
identify the deep fat fryer.
identify the parts of the deep fat fryer.
explain the parts of the deep fat fryer.
state safe procedures for use and care of the deep fat fryer.
illustrate safe procedures for use and care of the deep fat fryer.
demonstrate procedures for use and care of the deep fat fryer.
operate and care for the deep fat fryer.
develop work simplification methods for using the deep fat fryer.
evaluate the quality of products fried in the deep fat fryer.
identify the types of broilers.
name the important parts of the broiler.
explain the purpose of each part of the broiler.
state safe procedures for use and care of the broiler.
illustrate safe procedures for use and care of the broiler.
follow safe procedures for use and care of the broiler.
perfect techniques for use and care of the broiler.
identify exhaust hoods used in commercial food production.
identify parts of the exhaust hood.

SURFACE COOKING EQUIPMENT

COMPETENCIES The student will be able to:

cite steps in the operation and care of the exhaust hood.
explain the operation and care of the exhaust hood.
give examples for safe procedures for use and care of the hood.
apply safe procedures for use and care of the hood and fan.
perform assigned task related to the exhaust hood and fan.
show continued desire to properly maintain the hood.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Heating elements or burners supply direct heat for fast cooking.	Identify types of range tops	View labeled pictures of "hot top," "open top," and "fry top" ranges. Note the following: Which type has a solid top? Where is the hottest part of the range top? Which top can give heat instantly and be turned off when not needed? Which is really a large griddle? Which one gives more cooking area? Which top is useful for keeping foods warm at low temperatures and for preparing delicate items such as sauces? View transparencies of range tops. Name the types as quickly as you can as the transparencies are shown on the screen. Visit a restaurant supply to see different types of range tops.		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Take a study tour to a commercial kitchen of a utility company if one is available in your area to see commercial cooking equipment.		
	Identify the major parts of the range top	Become familiar with the important parts of the range illustrated on a handout sheet. Name the parts as the instructor points them out on the range top in the lab.		
	State safe procedures for use and care of the range top	Watch a demonstration by the instructor to indicate the proper methods of using and cleaning the range top. Note the following items: Are burners automatic or must matches be used? Is the gas turned on before or after lighting the match? How much of the surface of the solid top should be used for cooking? What top of the range cooking methods help keep the kitchen cool and save fuel? Why must grease not be allowed to build up on a range top?		
		List on the board the cleaning agents and tools for cleaning a range top.		
		Interview a cafeteria worker on the safe use of the range. Then work in pairs and list each safety precaution mentioned in the interview.		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Give examples of safe procedures for use and care of the range	Relate any personal experiences the cafeteria personnel might have had concerning safe use of the range. Take some photographs of range safety situations. Act out unsafe and safe procedures in use and care of the range as one classmate takes pictures. Use the pictures for a bulletin board, or practice sorting right and wrong procedures.		
	Apply safe procedures for operation and care when using the range	Secure equipment and supplies needed for cleaning the range top. Volunteer to demonstrate a cleaning procedure. Use the range top in preparing a vegetable, eggs, or a one pot meal.		
	Perform assigned task of operating a range	Operate the range top using the correct temperatures and pan for the food being cooked. Arrange the pots correctly according to burner size.		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The griddle, which eliminates the need for a steam table, is useful for fast, short order cooking.	Identify the griddle and its uses	View pictures of various models and sizes of commercial griddles. Note the thickness of the plate, the thermostatic control, the splash guard height, and the width of the grease trough. List aloud some foods which can be prepared on a griddle. Cite types of grills as pictures are projected on a screen.		
	Label the parts of the griddle	Identify each part of the griddle as it is shown on a transparency. Using a mimeographed sheet, label the parts on a diagram of the griddle.		
	Explain the parts of the griddle	Describe the purpose of one part of the griddle. Ask classmates to guess the part being described.		
	List safe procedures for use and care of the griddle	Listen to taped interviews with short order cooks as they describe safety precautions for using the griddle. List these rules aloud and on the board.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Listen to second portion of the interview as the short order cook describes how he/she cleans the grill at his/her particular restaurant.		
		Watch a demonstration by a representative of a power company on the safe use and care of the griddle. Observe the following: temperature control; oiling the griddle; breaking in a new griddle, cleaning with a spatula, grill screen or griddle brick; wiping clean; and reseasoning.		
	Describe safe procedures for use and care of the griddle	Tape yourself as you summarize the steps in using and cleaning the griddle. Play back the tape and check off the items on a list of procedures given to you by the teacher.		
	Operate the griddle using proper procedures for its operation and care	Follow proper procedures for cooking pancakes on the griddle. Have a partner check you on using the turner with the grain, using proper section for right brownness, and cleaning the grill.		
		Prepare grilled sandwiches with every class member making his/her own to practice using the grill correctly. Compare the products.		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Experiment with cooking eggs on the griddle. Compare results with a skillet cooked egg.		
	Perform assigned tasks using the griddle	Operate a "pancake house" for customers. Serve a variety of pancakes at a breakfast for teachers.		
		Serve a hamburger lunch, a bacon sandwich lunch, or a bacon and egg breakfast.		
Two factors influence the quality of a deep fried product: the careful filtering of oil and the use of the correct frying temperature.	Identify the deep fat fryer	Locate pictures of the deep fat fryer in a commercial equipment catalogue. Mount them on poster board and label them according to electric or gas models. Circle the type located in the lab.		
	Identify the parts of the deep fat fryer	Watch as the instructor or commercial cooking equipment representative points out the major parts of the deep fat fryer, and describes the operation and cleaning procedures for the deep fat fryer. The instructor or representative will tape labels to each section and later remove one at a time. Try to name the section from which the label is removed.		
		Match part names to a diagram of the deep fat fryer.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the parts of the deep fat fryer	Select one part of the deep fat fryer. Explain to the class the purpose or use of that part.		
		Explain to a partner each part of the fryer. Partner will check the parts identified on a diagram of the fryer.		
	State safe procedures for use and care of the deep fat fryer	View a film on frying in a commercial deep fat fryer.		
		Listen to taped directions for use of the fryer. Discuss the following: Why is it necessary to heat the fryer prior to frying time? What is the usual range of frying temperature for most foods? How can you tell when the proper temperature has been reached? Why are breaded items shaken after they are placed in the basket? Why is this process not done over the fryer? What is the holding temperature for the fryer between batches? What portion of the oil should be filtered first? What type solution can be used to clean the fryer in your lab?		
		Study a chart of foods and suggested cooking temperatures and times. Locate the proper temperatures on the deep fryer thermostat as		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		the teacher calls out a particular product such as doughnuts, chicken, or fried pies. Study a bulletin board display which lists the safety rules regarding grease fires.		
	Illustrate safe procedures for use and care of the deep fat fryer	Pantomime each step in operating the deep fat fryer. Have your partner check each item on a checklist and make corrections. Fry potatoes in fat that is too cold; judge the finished product. Fry canned biscuits at a low temperature. Compare them with those fried at a medium high temperature. Check the doneness of the center biscuit dough and the oiliness of the biscuit. Explain the reasons fried products may be too oily. Make a chart with illustrations of each step in cleaning the deep fat fryer. Post in the room.		
	Demonstrate procedures for use and care of the deep fat fryer	Practice operating the deep fat fryer. Experiment with such products as French fries, onion rings, shrimp, and breaded steak fingers. Apply rules for cooking frozen food products.		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Practice cleaning the deep fat fryer as your partner checks you on the following steps: filtering oil, wiping the kettle, burning clean the coils of the electric fryer, boiling detergent solution in the kettle, rinsing with vinegar water, drying the kettle, and storing the oil.		
	Operate and care for the deep fat fryer	Prepare fried pies and French fries in the deep fat fryer to sell with hamburgers during sports events or the lunch hour.		
		Take orders from teachers for doughnuts, fried pies, and fried chicken.		
	Develop work simplification methods for using the deep fat fryer	Devise a system to use when preparing and frying large quantities of a particular food such as fried pies or doughnuts. Determine the best method for placing the product in the fry baskets, for turning the product, and for packaging.		
	Evaluate the quality of products fried in the deep fat fryer	Act as an inspector and judge the fried products before packaging them for sale. Check for size, brownness, and shape of product.		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Gas broilers enhance the flavor of meat.	Identify the types of broilers	View a bulletin board display of various broiler types such as: charcoal, ceramic, open hearth, and salamander. Note which type is in the lab. Which types are used for finishing off food items?		
	Name the important parts of the broiler	Observe as the instructor points out each part of the broiler and explains its purpose. Name the parts of the broiler to a classmate.		
	Explain the purpose of each part of the broiler	Pin to the back of each student's garment the name of a broiler part. Have the student stand with his/her back to the class. Classmates will give verbal cues as the student attempts to guess what part of the broiler is named on the tag pinned to his/her back.		
	State safe procedures for use and care of the broiler	Brainstorm to list examples of foods which might be prepared in the broiler. Check several references on preparing meats to different stages of doneness. Observe a resource person as he/she demonstrates the parts, use, care, and safety of the broiler.		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Interview a broiler cook and tape his/her response to questions on safety, timing of meats, and customer preference on the way meats are prepared.		
		List aloud the steps to follow in using the broiler as the instructor writes them on the board.		
	Illustrate safe procedures for use and care of the broiler	Role play the position of a commercial food equipment representative, and explain the parts of the broiler and their use.		
	Follow safe procedures for use and care of the broiler	Work in teams of two or three to prepare simple foods, such as hamburger patties, toasted cheese sandwiches, tuna burgers, observing safety procedures and work habits. Evaluate individual work habits.		
	Perfect techniques for use and care of the broiler	Prepare short order hamburgers for teachers. Invite a resource person to eat so that he/she can observe the work habits. What suggestions did the resource person have for improvement?		
		Take orders for a special steak dinner for teachers. Prepare steaks in the broiler to specific doneness.		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
An exhaust hood prevents excessive heat while it removes smoke, grease, and vapor from the cooking area.	Identify exhaust hoods used in commercial food production	Note size and types of exhaust hoods seen on study tours of restaurants, cafeterias, and hospital kitchens. Visit a food service operation which has installed "all surface" fire protection. Listen as the manager explains how the thermostat located in the stacks above the cooking vats melts at a certain danger point and automatically dumps a chemical all over the surfaces near the cooking vats. Discuss why a chemical fire prevention system is used instead of a water type system.		
	Identify parts of the exhaust hood	Examine the exhaust system as the teacher names each part. Note whether the hood has a light.		
	Cite steps in the operation and care of the exhaust hood	Observe the teacher in a demonstration of the operation and care of the exhaust system located in the lab. Note: location of the On and Off switch, the light bulb, filters, and the stack or pipe which carries the smoke out of the building. Notice also the method for replacing light bulbs and filters. How often must filters be changed? Why is it important to keep the exhaust hood clean and free from grease build up?		

SURFACE COOKING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the operation and care of the exhaust hood	Explain to the class the function of the exhaust hood. Interview the fire marshall. Tape his/her responses to questions on why exhaust hoods are required by law.		
	Give examples for safe procedures for use and care of the hood	Describe the method for changing the filter and washing it. How often does each section need to be cleaned?		
	Apply safe procedures for use and care of the hood and fan	Practice washing the filter by hand; also wash it in the commercial dishwasher; compare results. Use the proper cleaning solution to clean the hood. Have the instructor check your work.		
	Perform assigned task related to the exhaust hood and fan	Clean and care for exhaust hood regularly following a duty chart.		
	Show continued desire to properly maintain the hood	Initiate the cleaning of the exhaust hood without being told.		

TRADE VOCABULARY

hot top
heat control
fry top
oven top
burners
pilot light
burner valve
elements
thermostatic control
grill
griddle
temperature
carbon deposits
griddle stone or brick
grid

thermostat
draining tray or drawer
grease trough
fats
frying basket
frying thermometer
strain
boiling
kettle
fill line
stacks
drain
coating or batter
breading
season

brown
adjustment lever
temperature knob
broiler
salamander broiler
infrared broiler
gas jet
ceramic briquets
exhaust fan
filter
fire protection
dry chemical
extinguishing agent
nontoxic

OVENS

COMPETENCIES The student will be able to:

identify the basic types of commercial ovens
identify the major parts of the ovens.
explain the differences in types of commercial ovens.
state safe procedures for use and care of the commercial ovens.
give examples of safe procedures for use and care of the commercial ovens.
follow correct procedures in using commercial ovens.
attempt to use the microwave oven.
practice cleaning a commercial oven.
use and clean the ovens without assistance.
accept responsibility for keeping ovens clean.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The range oven has a variety of uses, from baking to oven frying.	Identify the basic types of commercial ovens	View pictures of the range oven, microwave oven, and convection oven. List types of ovens seen while on study tour to a food service establishment.		
	Identify the major parts of the ovens	Listen to the instructor give an illustrated talk on the parts and operation of the range oven, convection oven, and microwave oven. Using a mimeographed handout, label each major part on the oven in the food service lab as the instructor names the parts.		

515

516

OVENS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the differences in types of commercial ovens	Divide into three groups. Each group should summarize the characteristics of one type oven. Describe the advantage of one type over another.		
	State safe procedures for use and care of the commercial ovens	List safe procedures for use, care, and cleaning of a regular oven, convection oven, and microwave oven.		
	Give examples of safe procedures for use and care of the commercial ovens	Identify in an oral question and answer period procedures for using an oven. Answer the following questions: When do you bake in a commercial oven? When should the high setting be used? Why do you preheat? Do you preheat each type of oven? Why should you avoid opening an oven door during baking? What is the procedure for cleaning an oven? Listen to case situations on bad experiences that have occurred when persons have used improper procedures with the oven. These may be cooking failures or accidents. Brainstorm to discover ways of avoiding these bad experiences.		

OVENS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Follow correct procedures in using commercial ovens	Practice setting dials on ovens for recipes chosen by the teacher or para-professional aide. Use correct procedures in using the oven when preparing food in class. Prepare casseroles to be served in the food service lab. Evaluate the casseroles.		
Microwave ovens are capable of speed defrosting, reconstituting foods, and totally preparing foods.	Attempt to use the microwave oven	Experiment with methods of thawing foods. Thaw one piece of frozen meat in the refrigerator, one in water, and one in the microwave oven. Compare thawing times. Take part in a lab in which the same type foods are cooked in a regular oven, convection oven, and microwave oven. Compare the time needed to cook the foods, and compare the taste, texture, and color of the foods. Cook some of the following foods in the microwave oven: popcorn, baked potato, frozen broccoli in a box, cake or baked product, bacon, steak, baked apple, hot chocolate, and coffee.		

OVENS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
If used and cared for properly, ovens can be kept in good operating order and can produce superior food products.	Practice cleaning a commercial oven	Work in teams of two to clean the oven. Two classmates will act as inspectors and evaluate the cleaning techniques used.		
	Use and clean the ovens without assistance	Take orders for breads, cakes, cupcakes, and pies that are baked in the oven, and set aside a certain day each week for baking these foods. Clean the ovens as needed.		
	Accept responsibility for keeping ovens clean	Clean the oven manually or automatically, depending upon the model available in the lab. Do not wait until you are told to clean the oven.		

TRADE VOCABULARY

preheat

heat circulation

continuous cleaning

main burner valve

timer

thaw

browning element

oven ready light

vent control

directional head control switch

warm up button

reconstitute

thermostat

self cleaning

pilot light

microwave

standing time

STEAMING EQUIPMENT

COMPETENCIES The student will be able to:

- cite reasons for use of steam in cooking foods.
- state differences in steam jacketed kettle and steamer.
- identify the varieties of steam cookery equipment available.
- identify the major parts of the steam cookery equipment and the use of each part.
- explain in his/her own terms the purpose for each part of the steam cookery equipment.
- state safe procedures for use and care of the pressure sauce pan.
- give examples of safe procedures for use and care of steam cookery equipment.
- apply safe procedures for use and care of the steam cookery equipment.
- perform assigned tasks using steam cookery equipment.
- display continued desire to properly operate and maintain the steam cookery equipment.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The steam jacketed kettle provides even heat distribution, an important factor in the cooking of many foods.	Cite reasons for use of steam in cooking foods	Watch a demonstration by the instructor as potatoes are cooked by boiling on top of the range and by using the pressure cooker for the same amount of time. Check the potatoes. Which ones cooked more quickly? Why is shorter cooking time important in commercial food production? What additional reasons are there for using steam?		
	State differences in steam jacketed kettle and steamer	View pictures and diagrams of steam type cooking equipment. Listen to an explanation of how the steam jacketed kettle cooks food and how the steamer cooks food. What differences did you observe in the steam jacketed kettle and the steamer?		

STEAMING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Identify the types of steam cooking equipment shown in pictures or diagrams and state whether steam comes in direct contact with the food in each type equipment.		
Pressure sauce pans are used to produce small quantities of vegetables, meat, poultry, and fruits.	Identify the varieties of steam cookery equipment available	Tour a large food service establishment. Identify the types of steam cooking equipment by checking the items on an equipment list. Discuss the following: What sizes of steam cookery equipment are available? Are steam kettles tiltable?		
		Label diagrams or pictures of the pressure sauce pan, steam jacketed kettle, and steamer.		
		Name aloud the types of steam cookery equipment as the instructor shows examples on the opaque or overhead projector.		
	Identify the major parts of the steam cookery equipment and the use of each part	Study illustrated pictures or if available the actual steam kettle, pressure sauce pan, or steamer to identify major parts of the equipment.		
		Tour school cafeteria or other food service establishment and observe as personnel point		

STEAMING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		out the major parts of the steam cookery equipment and demonstrate their use. Practice identifying for a classmate the parts of the pressure cooker, a steam jacketed kettle, and steamer. Use a card sort with three headings: pressure sauce pan, steamer, and steam jacketed kettle. Stack the cards naming the major parts of each under the correct pieces of equipment. Check your answers.		
	Explain in his/her own terms the purpose for each part of the steam cookery equipment	Select a labeled part of the pressure sauce pan, steam jacketed kettle, or steamer, and explain to the class its purpose.		
Pressure steam cookers cook faster and use less water; as a result they ensure highly nutritious foods.	State safe procedures for use and care of the pressure sauce pan	Observe a demonstration by the instructor on the safe use and care of the steam jacketed kettle. Examples of food preparation to be demonstrated: browning and steaming a roast, making stock gravy, cooking vegetables, preparing pudding. Note the following: Which is added to the kettle first, water or vegetables? Are foods cooked at a boil or a		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		simmer? Why should foods be removed immediately after they are cooked? View a demonstration of the procedures to follow in using the pressure sauce pan. Note the amount of water used, the method of closing lid properly, the method of maintaining an even pressure by controlling the amount of heat, use of time chart, the method for reducing pressure, the time the sauce pan can be opened safely, and the need for careful cleaning of the rubber gasket. Repeat procedure you have observed for a classmate. View a film on the use of a steamer by a commercial chef. Note the steps to follow in using the steamer and in cleaning the equipment. Note the following: What built in safety features are there? When can the door be opened? What precaution must be taken to prevent burning one's hands? What tool is used for cleaning the interior of the steamer? Why must door gaskets be cleaned thoroughly? Divide the class into three teams. Each team will select one piece of steam cookery		

STEAMING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		equipment and explain to the class the procedures for operating and cleaning the equipment.		
Steam and pressure cooking is safe if the equipment is in good repair and the workers are totally familiar with the use of that equipment.	Give examples of safe procedures for use and care of steam cookery equipment	Pantomime what to do in case of steam equipment failure or malfunction. Examples: steam leaking past the door gasket on a steamer, and steam kettle pops and jumps.		
	Apply safe procedures for use and care of the steam cookery equipment	Practice in the lab operating the steamer, steam jacketed kettle, and pressure sauce pan according to the procedures outlined on a flip chart.		
	Perform assigned tasks using steam cookery equipment	Assist a cafeteria worker in operating steam cookery equipment if it isn't available in the lab. Rotate until all students have had opportunity to assist. Prepare soup using steam cookery equipment for a "Kettle Soup of the Day." Serve kettle soup with a quick bread. Assist the instructor in cleaning steam cookery equipment during the semester.		

STEAMING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Use steam cookery equipment in preparing foods in the food service laboratory.		
	Display continued desire to properly operate and maintain the steam cookery equipment	Initiate the use of the steam cookery equipment in labs where speed in vegetable and meat cookery is necessary.		

TRADE VOCABULARY

pressure

steam valve

safety valve

steam jacket

baskets

steam compartment

pressure indicator or gauge

water level gauge

broiler tank

perforated basket

timer

pounds pressure

gaskets

exhaust valves

COLD STORAGE EQUIPMENT

COMPETENCIES The student will be able to:

- identify the purposes of storing food in the refrigerator and freezer.
- identify types of cold storage facilities.
- identify storage areas of the refrigerator and freezer.
- state procedures for storing specific foods in refrigerator or freezer.
- illustrate storage of food in refrigerator and freezer.
- identify safe procedures for use and care of the refrigerator and freezer.
- illustrate safe procedures for use and care of the refrigerator and freezer.
- apply safe procedures in use and care of the refrigerator and freezer.
- initiate precautionary measures in using and maintaining the refrigerator and freezer.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The financial success of a food service operation is greately dependent upon the proper use of cold storage equipment.	Identify the purposes of storing food in the refrigerator and freezer	Discuss as a group reasons for refrigerating foods. Examples: to prevent spoilage, improve taste of some foods, preserve for a longer period of time, and improve texture or add crispness.		
	Identify types of cold storage facilities	View a film showing different types of reach-in and walk-in freezers and refrigerators. Locate pictures of reach-in and walk-in freezers and refrigerators. Label pictures or diagrams of cold storage facilities.		

COLD STORAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Take a study tour to view the cold storage facilities in the school cafeteria or other food service establishments. Note the following: Are boxes stacked next to the wall? Is anything stored directly on the floor? Are new supplies stored in front of older supplies?		
	Identify storage areas of the refrigerator and freezer	View a chart which indicates what types of foods should be stored in each of these sections: cold, colder, coldest, and freezing compartment. Label the shelves of the lab refrigerator with the following terms: cold, colder, coldest, and freezing.		
	State procedures for storing specific foods in refrigerator or freezer	Study a handout sheet on methods for placing foods in walk-in freezers and refrigerators.		
	Illustrate storage of food in refrigerator and freezer	Place food models on a flannel board under the proper cold storage category. Draw sketches of a walk-in freezer and a walk-in refrigerator. Draw in the proper place the following foods: boxes of frozen		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		meat patties, cheese, nonfat dry milk, fresh peaches, and crates of eggs.		
	Identify safe procedures for use and care of the refrigerator and freezer	List safety measures in using and cleaning the freezer or refrigerator. Discuss what to do in the following situations: excessive frost on coils and unusual noises or vibrations from the cooling unit. Make a poster to illustrate the care and cleaning of the refrigerator and freezer. Display the poster near the refrigerator and freezer. Study a handout on how to defrost the refrigerator in the lab. Name the steps to a classmate without looking at the handout. Watch a demonstration by the instructor on proper procedures for cleaning the commercial freezer and refrigerator. Note the importance of: cleaning up spills in a walk-in freezer or refrigerator, the importance of the use of soda instead of detergents for cleaning reach-in refrigerator, and the importance of observing the temperature gauge or dial in the laboratory refrigerator and freezer.		

COLD STORAGE EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Illustrate safe procedures for use and care of the refrigerator and freezer	Cite in round robin style procedures for use and care of commercial refrigerators and freezers.		
	Apply safe procedures in use and care of the refrigerator and freezer	Use correct procedures for storing foods in the refrigerator and freezer during training in food service.		
To safeguard against faulty and inadequate equipment, check the cold storage equipment each day for food spoilage.	Initiate precautionary measures in using and maintaining the refrigerator and freezer	Report and remove food items which have been in the refrigerator or freezer too long or aren't properly covered or wrapped. Wipe up any spills immediately even though it is not your turn to clean the cold storage areas.		

TRADE VOCABULARY

thaw

hydrator

spoil

freeze

crisper

temperature

chill

meat drawer

vapor moisture-proof paper

CUTTING EQUIPMENT

COMPETENCIES The student will be able to:

cite safe procedures for operating a slicer.
identify the parts of the slicer.
describe the purpose of each part of the slicer.
list safe procedures for operating and cleaning the slicer.
follow the procedures for using and cleaning the slicer.
perform assigned tasks operating the slicer.
identify parts of food cutter or chopper.
state safe procedures for use and care of the food cutter or chopper.
cite procedures for safe operation of the food chopper.
practice placing the parts of food chopper in proper position.
operate and clean food chopper under supervision.
gain skill in operating the food cutter.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Careless or improper use of commercial cutting equipment is extremely hazardous.	Cite safe procedures for operating a slicer	Observe demonstration by the instructor on the operation of the slicer. What safety precautions are absolutely necessary? Watch as the instructor disassembles and names each part of the slicer.		
In order to clean cutting equipment properly, one must have adequate knowledge of the parts and construction of the machine.	Identify the parts of the slicer	Study handout sheet on slicer parts. See how many parts you can name as a transparency diagram of the slicer is shown.		
	Describe the purpose of each part of the slicer	Point to each part and give its purpose.		

CUTTING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	List safe procedures for operating and cleaning the slicer	Repeat to themselves the steps in operating and cleaning the slicer as the teacher writes them on board. Study a handout sheet on steps in operating and cleaning the slicer. View slides on cleaning the slicing machine. List the steps in cleaning the slicer.		
Through a minimum amount of physical exertion, a slicer can produce uniformly thick food portions.	Follow the procedures for using and cleaning the slicer	Practice, as a teacher aide guides, using the slicer to slice cheese or meat. Make a poster showing settings on slicer recommended for various foods and post in the food service lab.		
	Perform assigned tasks operating the slicer	Check the chart on slice settings, set the controls, and slice food products for the lab without assistance from the teacher.		

CUTTING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The food cutter or chopper provides uniformly cut or chopped raw food items in quantities necessary for commercial food production.	Identify parts of food cutter or chopper	Look at handout sheet and locate major parts of a food chopper as the teacher demonstrates disassembling the chopper.		
	State safe procedures for use and care of the food cutter or chopper	View a transparency as the instructor or resource person lists steps in safe use and care of the food chopper.		
	Cite procedures for safe operation of the food chopper	Watch as the instructor demonstrates chopping cabbage, dry bread, and ham with the chopper. What foods cannot be cut with the food chopper?		
		Observe a food service worker in a commercial establishment operating the food chopper. What safe practices are emphasized?		
	Practice placing the parts of food chopper in proper position	Work individually as para-professional teacher supervises to reassemble the chopper.		
	Operate and clean food chopper under supervision	Prepare a simple salad. Use the food chopper as the teacher supervises. Serve samples to fellow students. Note the quality of product.		

CUTTING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Clean the food chopper as the teacher gives directions.		
	Gain skill in operating the food cutter	Prepare a salad luncheon for teachers using foods which can be chopped using the commercial food chopper.		
		Prepare a chow-chow or relish and store for use later.		

TRADE VOCABULARY

bowl guard

safety catch

bowl

knives

blade

slicer knife

blade guard

blade control indicator

food carriage

food holder

gauge plate

scrape tray

receiving tray

FOOD PREPARATION STATIONS

COMPETENCIES The student will be able to:

identify the salad station unit.
name the sections of the salad station unit.
list procedures for cleaning the salad station.
explain the steps in cleaning the salad station.
practice steps in cleaning the salad station.
identify the baker's table.
name the parts of the baker's table.
list the steps in cleaning the baker's table.
illustrate steps in cleaning the baker's table.
carry out procedures for cleaning the baker's table.
acquire speed in cleaning the baker's table.
identify the sandwich station.
name the parts of the sandwich station.
explain the parts of the sandwich station.
cite the steps in cleaning the sandwich station.
describe proper methods for cleaning the sandwich station.
follow the correct procedures for cleaning the sandwich station.
gain skill in using proper procedures for cleaning the sandwich station.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The production of food items at one centralized location, such as a worker station, increases the speed and efficiency of the food service worker.	Identify the salad station unit	View slides or photographs of various models of the salad station. Identify the set up for institutional establishments and for a short order establishment. Discuss why the salad station should be located near a reach-in or walk-in refrigerator.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		View the salad station located in the food service lab as the teacher indicates the sections of each type. Institutional type: sink and cleaning unit, work table, chopping board, grinding and chopping equipment, movable tanks for salad ingredients, drain boards, back splash, legs, and supports. Short order type: wells for different salad ingredients, cover, refrigerator unit. (May be same as the sandwich station.)		
	Name the sections of the salad station unit	Name the equipment and sections of the salad station as they are indicated on a transparency.		
	List procedures for cleaning the salad station	Observe a demonstration by the teacher on the steps in sanitizing the salad station. Note the following: Why must a sanitizing solution be used at the end of each shift? Why is deliming done twice a week? Why is the sink sometimes rinsed with a solution that reduces bacteria that causes odor and decay?		
	Explain the steps in cleaning the salad station	Summarize for the class the steps involved in sanitizing the salad station.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Practice steps in cleaning the salad station	Clean the salad station following a lab on vegetable or salad preparation.		
	Identify the baker's table	View pictures of various models of baker's tables. Discuss the types of food preparation done at a baker's table. Why is the mixer located near the baker's table? The baker's scale?		
	Name the parts of the baker's table	Observe the baker's table located as the teacher indicates the major parts: stainless steel counter top or heavy wooden counter, ingredient shelf, and portable ingredient bins or undershelf.		
	List the steps in cleaning the baker's table	View the cleaning procedure used by cafeteria workers for cleaning the baker's table. Why must loose food particles be scraped away before scrubbing with a cleaning solution? Is stainless steel air dried or dried with a cloth and polished? What chemical is used on wooden topped baker's tables to keep them sanitary?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Illustrate steps in cleaning the baker's table	Prepare to illustrate the effect of water on a surface covered with dried yeast dough. Scrub one section with a sponge and water, scrape another section free of the dried dough, and then wash both with a sanitizing solution. Compare the results.		
	Carry out procedures for cleaning the baker's table	Clean the baker's table following a yeast dough demonstration by the teacher.		
	Acquire speed in cleaning the baker's table	Follow a rotation chart and clean the baker's table after labs which include the preparation of bakery products.		
	Identify the sandwich station	View a transparency or pictures of various models of sandwich stations.		
	Name the parts of the sandwich station	View transparency overlays of the parts of the sandwich station. Example: the first transparency shows a drawing of the refrigerated compartment; the second, the individual quart size wells for sandwich ingredients; the third, the work board; and the fourth, the cover for the wells.		

FOOD PREPARATION STATIONS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Using a mimeographed diagram, label the sections of the sandwich station available in the lab as you point to them.		
	Explain the parts of the sandwich station	Describe to the class the purpose of each section of the sandwich station.		
	Cite the steps in cleaning the sandwich station	Watch as the teacher demonstrates the procedure for cleaning the sandwich station. Note the following: How are the stainless steel areas cleaned? The wooden working areas? The shelves and interior of the refrigeration unit?		
	Describe proper methods for cleaning the sandwich station	Choose one area of the sandwich station and explain to the class the steps in cleaning it.		
	Follow the correct procedures for cleaning the sandwich station	Clean the sandwich station following a teacher demonstration of short order sandwiches.		
	Gain skill in using proper procedures for cleaning the sandwich station	Follow a rotation chart and clean the sandwich station properly after all sandwich labs.		

TRADE VOCABULARY

drain boards

back splash

stainless steel

ingredient bins

HOLDING AND SERVING EQUIPMENT

COMPETENCIES The student will be able to:

list the most common types of hot food holding and serving units found in food service.
cite safe use and care procedures for each type of hot food holding and serving unit.
cite the advantages and disadvantages of common types of hot food holding and serving units.
describe safe use and care procedures for hot food holding and serving units.
show safe use and care procedures for hot food holding and serving units.
perform assigned tasks using the hot food holding and serving unit.
list the types of cold food holding and serving units most commonly found in food service.
cite safe use and care procedures for each type of cold food holding and serving units studied.
describe safe use and care procedures for each type of cold food holding and serving unit.
demonstrate safe use of the cold food holding and serving unit.
perform assigned tasks related to each cold food holding and serving unit studied.
choose to safely use and care for cold food and hot food holding and serving units.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Holding and serving units which use dry or steam heat are designed to keep foods hot before and during serving.	List the most common types of hot food holding and serving units found in food service	Make a study tour of the school cafeteria and other food service facilities. Make a list of the types of hot food holding and serving units available. View a bulletin board titled, "Keeping Hot Foods Hot!" Name the types of hot food holders pictured on the bulletin board. Use catalogs from equipment supply houses and institution and power company magazines to		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		locate pictures of hot food holding and serving units. Cut out and label the pictures.		
To control the growth of germs in foods held in a steam table, it is necessary to maintain a minimum temperature of 140°F.	Cite safe use and care procedures for each type of hot food holding and serving unit	Study handout which lists precautions for operating hot food holding and serving equipment. Observe a demonstration by the instructor on the use and care of the hot food holding and serving equipment available in the lab.		
If water in a steam table is allowed to boil or give off excessive steam, dry, overcooked foods may result.	Cite the advantages and disadvantages of common types of hot food holding and serving units	Listen to tapes of food service managers as they discuss the advantages and disadvantages of the common hot food holding and serving units. Study the chart produced by the students listing the advantages and disadvantages of various hot food holding and serving units. Examples: steam serving table, dry heat serving table, infrared lamp, twin well warmer, and bun warmer. Tour a hospital kitchen; note the methods used for keeping the food hot while it is being		

HOLDING AND SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		distributed to patients. How do these methods differ from a regular steam table? View a film on correct methods for using holding equipment to prevent contamination of food.		
The best time to clean steam table equipment is immediately after use.	Describe safe use and care procedures for hot food holding and serving units	Give examples of safety precautions to follow in using each type of hot food holding and serving equipment shown on the screen by the opaque projector.		
	Show safe use and care procedures for hot food holding and serving units	Role play the part of a supervisor instructing a new employee, and demonstrating to the class the procedure for using hot food holding and serving equipment. Set the heat controls and prepare the hot food holding and serving equipment for use in serving food. Examples: hamburgers--hold patties and French fries in the steam table and buns in the bun warmer.		
	Perform assigned tasks using the hot food holding and serving unit	Set up the holding and serving units and place foods in the correct order for serving foods to customers; replenish hot food supply as necessary without being told; clean the serving and holding units using correct procedures.		

HOLDING AND SERVING EQUIPMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Holding and serving units for cold food ensure crisp, fresh foods through the use of a refrigeration unit or an ice bed.	List the types of cold food holding and serving units most commonly found in food service	Look through commercial equipment magazines and find the varieties of cold food holding and serving units. Tour the school cafeteria. Note the type of cold food holding and serving units used. After returning to class, list on the board the foods served in the cafeteria that required cold holding and serving. Identify diagrams of cold serving tables cooled by ice or machine and the holding refrigerator.		
	Cite safe use and care procedures for each type of cold food holding and serving units studied	View diagrams of the different types of cold holding and serving units available. Listen as an equipment company representative describes their use and care as well as advantages of each type. Watch a demonstration on safe use and care of the cold food holding and serving unit in the foods lab. State procedures orally for the use of each type of cold food holding and serving equipment as the teacher writes the name of each type on the board.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe safe use and care procedures for each type of cold food holding and serving unit	Compare cold food units to refrigerated food units. Describe to the class how to use the cold food holding and serving equipment available. Include how to fill, display food items, remove ice, and clean the equipment. Role play to illustrate a customer's reactions to a salad case covered with finger prints, a hair in the ice in the cold bain marie, and hardened whipped cream on the racks of the cold cabinet.		
	Demonstrate safe use of the cold food holding and serving unit	Prepare a cold food snack and hold it until ready to serve. Examples: a parfait, mousse, party sandwich, or cold refrigerator pie.		
	Perform assigned tasks related to each cold food holding and serving unit studied	Store cold items such as salads, desserts, juice, and milk during lab according to a rotating duty chart. Prepare individual cold plates according to a special order.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Choose to safely use and care for cold food and hot food holding and serving units	Survey several persons on the topic, "What Bugs Me Most About Restaurant Food." Present the findings to the class. How many times was food served at the wrong temperature listed as a complaint? Take responsibility for ensuring that food prepared is served at the correct temperature without being told.		

TRADE VOCABULARY

steam serving table

holding oven

thermostat

cold pans

cold cabinets

dry heat serving table

cold serving table

pass through warmer

infrared lamp

bun warmer

holding refrigerator

banquet cart

portable holding units

TOASTERS

COMPETENCIES The student will be able to:

identify the individual and conveyor toaster.
identify parts of the commercial toasters.
give examples of uses of toasters in commercial food preparation.
cite steps in using and caring for the toaster.
demonstrate steps in operating the commercial toaster.
gain speed in operating the toaster in lab situations.
identify types of waffle irons.
identify the parts of the waffle iron.
list steps in using and caring for the waffle iron.
explain the steps in using and caring for the waffle iron.
carry out the steps for operating the waffle iron.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Following safe methods of cleaning and using the toaster will keep it in good repair, will result in high quality food products, and will promote safety and sanitation in the overall operation.	Identify the individual and conveyor toaster	Look at pictures of commercial toasters from commercial equipment catalogs. Note whether they are individual or conveyor toasters.		
		Note the types of toasters available in the lab.		
	Identify parts of the commercial toasters	Observe as the instructor names the parts of a toaster.		
		Label the following parts on a diagram of an individual toaster: heating element, cord, crumb tray, ejector, and brownness regulator.		

TOASTERS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Label the following parts on a diagram of the conveyor toaster: starter switch, thermostat dial, toast baskets, and heating elements.		
	Give examples of uses of toasters in commercial food preparation	Brainstorm to explain the various ways a toaster could be used in food production.		
	Cite steps in using and caring for the toaster	Observe conveyor toasters in operation when study tours are conducted of food service establishments. Listen as an employee explains procedures for their use and care.		
		Observe a demonstration by the instructor of operating the toaster. Discuss the three major safety factors: disconnecting cord before cleaning, keeping fingers clear of elements, and keeping hands dry.		
		Note the method of cleaning with damp cloth, the use of non-abrasive cleaning agents, the prevention of water from getting on the elements, the method of cleaning crumb tray, and the boiling of baskets for conveyor toaster.		

TOASTERS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Demonstrate steps in operating the commercial toaster	Test run a couple of slices of bread, check item for desired brownness, and adjust controls if necessary. Experiment in using the toaster to heat commercially prepared pop tarts, waffles, or English muffins. Clean and store the toaster; a classmate will score your use and storage of the toaster.		
	Gain speed in operating the toaster in lab situations	Have a "Toast Nook" for off duty teachers or students in other vocational classes. Make to order such varieties of toast as butter, raisin, cinnamon, and plain toast to be served with coffee or hot chocolate. Prepare a breakfast of short order sandwiches.		
	Identify types of waffle irons	View pictures or a display consisting of waffle iron, double waffle iron, round models, and rectangular models.		
	Identify the parts of the waffle iron	Study a diagram of a waffle iron with the major parts labeled. Note the waffle iron available in the lab. Name the parts of the waffle iron.		

583

584

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	List steps in using and caring for the waffle iron	View a teacher demonstration on how to use the waffle iron correctly. Note the following: How long must the iron be preheated? What method is used to determine if the waffle is done? Are waffles to be removed immediately from the waffle iron? What tools or utensils can be used to remove particles of waffle left on the iron? What is used in place of soap and water for cleaning the waffle iron?		
	Explain the steps in using and caring for the waffle iron	Work with a partner to explain the steps in using the waffle iron. Your partner will explain the proper method for cleaning the waffle iron. Check one another's explanations for accuracy.		
	Carry out the steps for operating the waffle iron	Use a prepared waffle mix to practice making waffles in lab. Each student should pour one waffle, bake it, and remove it correctly. Check your product for the degree of brownness you wanted.		

585

586

TRADE VOCABULARY

heating element

appliance cord

ejectors

regulators

crumb tray

conveyor

starter switch

thermostat

thermostat dial

test run

preheat

toast baskets

toast chute

RECEIVING STORING & ISSUING

VII. Receiving, Storing, and Issuing

Page

Synopsis 354

Performance Competencies 354

Receiving, Storing, and Issuing 355
    Receiving
    Storage
    Inventory
    Issuing
    Trade Vocabulary

Storeroom Safety Operations 369
    Lifting Methods 371

Food Costs and the 40 Thieves 375

589

RECEIVING, STORING, AND ISSUING

SYNOPSIS

Because they play such an important role in cost control, receiving, storing, and issuing are important phases of food production. It is absolutely essential to check deliveries for both quality and quantity. Thoughtful storage of food ensures quality and safety. Food should be issued on a first-in, first-out basis; this method prevents food spoilage which is wasteful and costly. Strict adherence to proper issuing procedures discourages careless requisitioning and stealing.

PERFORMANCE COMPETENCIES

The student will utilize correct procedures for receiving, storing, and issuing food.

The student will endorse receiving, storing, and issuing procedures which contribute to maintenance of food quality.

RECEIVING, STORING, AND ISSUING

COMPETENCIES The student will be able to:

list facilities and equipment needed for receiving and storing food.
identify forms used in receiving food.
summarize procedures for receiving food.
utilize correct procedures in receiving food.
endorse receiving procedures which ensure receipt of the quantity and quality food ordered.
state reasons for careful food storage.
cite procedures for storing food.
explain procedures for storing foods.
demonstrate ability to store food properly.
accept responsibility for storing food properly.
define inventory.
explain procedures for taking an inventory.
demonstrate ability to take inventory.
identify procedures for issuing food.
summarize procedures for issuing food.
employ correct procedures for issuing food.
form a habit of using requisition forms correctly.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Careful checking of deliveries for both quantity and quality saves the food service establishment money.	List facilities and equipment needed for receiving and storing food	Tour a commercial food service establishment or school cafeteria to view receiving and food storage facilities. What three ways are foods stored? Observe the arrangement of foods in the storage room, the refrigerator, and the freezer. Listen as the receiving clerk or storeroom person points out features of the facilities. What equipment is essential for		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		receiving food? Why is ability to use scales accurately essential? Locate food storage facilities in food service lab. Listen to a receiving clerk describe procedures for receiving food. Why is it necessary to weigh each item received separately? What procedures are used to check quality of perishable fruits and vegetables? How can tagging meats with their weight at time of delivery save time later? Why should checking be done before signing the invoice or delivery slip? Who else should check perishables? How can the receiving clerk be sure each item meets the specifications of the order? Why should the receiving clerk be familiar with the meat specifications of management? Know how to read meat labels and inspection stamps? Why should he/she know how to weigh and measure meats? Why should prices and quantities not merely be copied from the invoice? What receiving records are needed? What is "blind receiving"? What procedure is used for refusing part of an order? What procedure is used if the order is short?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Listen as teacher describes procedures to be used in storing food in the food service lab. Answer questions about procedures to be used until you can recite them without hesitation. List the points every shipment received should be checked against the invoice for. Include type of item, size, number of items, weight, quality, and condition. How do you know that the delivery invoice represents what was ordered? Legally what does the receiving clerk's signature mean on an invoice?		
		NOTE TO TEACHER: This is a good opportunity for mathematics enrichment. See section entitled Food Service Math: Problem Solving for examples of problems related to food service.		
	Identify forms used in receiving food	Study sample receiving records, receiving tickets, and receiving or invoice stamp. How are these used in receiving food? If daily receiving records are used, who gets each copy? What is included on the daily receiving record?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Summarize procedures for receiving food	Make a poster to serve as a reminder briefly stating procedures for receiving. Practice filling out forms to be used in the food service lab for receiving food.		
	Utilize correct procedures in receiving food	Role play to practice procedures for receiving food. One student takes the part of the delivery person, another of the receiving clerk. Take turns receiving food for the food service lab according to a rotation chart. Which should be inspected more thoroughly, canned tomatoes or fresh tomatoes?		
	Endorse receiving procedures which ensure receipt of the quantity and quality food ordered	Brainstorm to list the places from which the following foodstuffs are obtained: Bakery items, produce, meats and poultry, seafood, and dairy products. Go on a field trip to a large commercial bakery, packing house, produce warehouse, poultry farm, and/or a wholesale fishery. What are the student's reactions to the places they visited? Observe procedures which ensure that foods delivered are the exact quantity ordered and that the quality meets the established		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		specifications, even though these procedures take more time. Never sign a delivery slip or invoice without checking the goods received first. Ask supervisor to check any items about which there is a question. Discuss personal qualities the receiving clerk needs. If the receiving clerk is consistently thorough and honest when inspecting shipments, what influence may this have on the delivery man and his company?		
		Listen as a classmate participating in the co-op program describes the receiving procedures at the food service establishment where he/she works.		
The quality and safety of food are affected by methods of storage.	State reasons for careful food storage	Brainstorm to list reasons for careful food storage. How is food storage related to sanitation? How can food storage affect profits? How can storage of food influence how flavorful and appetizing it is to the customer?		
	Cite procedures for storing food	Listen to a health inspector describe acceptable procedures for storing food. What is the chief function of the storage department? When should foods be stored after they are received? Which foods should be stored first?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		What cleanliness and sanitation standards should be maintained in refrigerators? Freezers? Storeroom? Study charts showing temperatures at which various foods should be stored and the acceptable length of time each may be stored. Post copies of the charts near each storage area. Observe a demonstration on storing foods in the refrigerator. How often should foods be checked for spoilage? Which foods should be stored away from strong odored foods? What special procedures should be followed for storing eggs? Butter? Cheese? Fruits and vegetables? Meats? Why is it necessary to allow room for air to circulate? What type pans allow food to cool most quickly? Why should prepared foods be covered? Should the refrigerator door be allowed to remain open? Observe a demonstration on storing foods in the freezer? How should foods be wrapped for freezing? What types of wrap may be used for freezing? What type containers may be used?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Observe a demonstration of storing foods in the storeroom. What type containers should be used for storing dry bulk foods such as flour, sugar, and salt? Why should foods be stored off the floor? How can labeled shelves aid in locating items? How can arranging foods by groups such as cereals, fruits, soups, and vegetables, or alphabetically or placing like foods together, aid in locating items? What is meant by first-in, first-out? At what temperature should canned goods be stored? Should non-food items such as soaps, detergents, insect powders, and rat and other poisons be stored in the storeroom? Why?		
	Explain procedures for storing foods	Divide into groups of four. Each player draws a number. Player who draws the highest number may draw a card listing a food to be stored. If the player correctly tells how to store the food to the satisfaction of other players, he scores four points. If he cannot, the player who has drawn next highest number tries to answer. If correct, he scores three points. A player giving only a partial answer may receive half the points, and the next player who can complete the procedures receives the remaining points. Cards for which correct		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		storage procedures are given are placed in a discard pile. If no player can tell how to store the food, players look up the correct procedures in references or ask the teacher. The card is returned to the draw pile, which is then shuffled. The player scoring the most points at the end of a specified time period is the "Food Storage Expert" and may have the first opportunity to be in charge of receiving and storing food. View a role play situation of a food service worker who leaves the freezer door open unnecessarily, makes several trips to the freezer or refrigerator for items needed in one lab, doesn't use a cart to collect items, stores food uncovered, and uses a sharp knife to chip off ice when defrosting. Identify as many incorrect procedures observed as you can.		
	Demonstrate ability to store food properly	Prepare a display case using food models and vapor and moisture proof wrap to illustrate procedures for proper refrigerator and freezer storage. Practice procedures for storing food properly under teacher's supervision. Store eggs to		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		ensure proper circulation of air. Wrap butter with a closely fitting cover to prevent rancidity. Store strong flavored cheeses away from eggs. Prepare fruits and vegetables for storage.		
		Store meats so air can circulate around all surfaces. Store fish in a well insulated fish box surrounded with ice and away from other foods. Allow at least 24 hours for thawing fish, meats, and fruit pies in refrigerator and do not refreeze. Label shelves. Arrange goods in first-in, first-out order. Store heaviest and most frequently used items nearest entrance.		
	Accept responsibility for storing food properly	Store all foods immediately upon receipt from most perishable to least perishable without being reminded.		
		Voluntarily check food daily for spoilage and to identify foods which need to be used immediately, when you are in charge of storeroom.		
		Wipe up any spills and remove particles of food from storage areas without being told.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Rotate stock so that foods are used on a first-in, first-out basis, even though following this procedure is time consuming and requires additional energy.		
Issuing food on a first-in, first-out basis prevents spoilage which is wasteful and costly.	Define inventory	Listen as a storeroom clerk explains procedures for taking inventory. Define inventory.		
	Explain procedures for taking an inventory	Explain in your own words procedures for taking inventory. What forms are used? Why are periodic inventories made?		
	Demonstrate ability to take inventory	Follow procedures for taking inventory in the food service storeroom once during the year on a rotating basis.		
Careless requisitioning or unauthorized requisitioning can waste the time and money of a food service establishment. Moreover, careless requisitioning encourages stealing.	Identify procedures for issuing food	Observe a demonstration by a chef, steward, or storeroom person on procedures for issuing food. What procedure is used to requisition food? Who may have to approve each requisition? How are requisitions like "checks drawn on a food bank"? Is food requisitioned all day or only during specific hours? Why? Who is responsible for checking daily to see if any foods need to be used immediately?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Study a sample requisition form. What information is included? Why may requisition forms be used to control distribution?		
		Listen as teacher describes procedures to be used in issuing food in the food service lab.		
	Summarize procedures for issuing food	Make a poster listing procedures for issuing food to post in the food storage area.		
	Employ correct procedures for issuing food	Practice filling out requisition forms. Draw a recipe card for a food which might be prepared in the food service lab. Fill out a requisition form for the ingredients which would be needed from the stockroom.		
		Fill out a requisition form to request foods from the stockroom each time you prepare food. Be sure to request all items, allowing time to have them delivered to your work station when needed. Do not acquire a habit of requesting food several times a day or as needed during a lab.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Use correct procedures for issuing food in the foods lab. Take turns being the steward by following a rotation chart.		
	Form a habit of using requisition forms correctly	Make an effort to carefully and accurately fill out each requisition form. Include the ordering department, the item needed, the size or amount needed, the grade required, the person responsible for the order, and the time the order is needed. Secure approval from the instructor without being reminded. Check each requisition carefully before filling when you are in charge of issuing food. Do not fill a requisition which has not been approved by the instructor. Volunteer to list foods which have not been used in several months.		

TRADE VOCABULARY

receiving
receiving clerk
delivery
purchase order
invoice
delivery slip
specifications
quality
quantity
credit memo
receiving records
receiving tickets
receiving or invoice stamp
daily receiving sheet
conventional receiving
blind receiving
storeroom man
steward
perishable foods
spoilage
aging (of meats)
circulation
rancid
thawing
swelling (of cans)
dry bulk foods
first-in, first-out
issuing
requisition form
inventory

615

STOREROOM SAFETY OPERATIONS

Safety rules are reminders of ways in which to prevent accidents. In general, storage rooms and compartments should be located away from sources of contamination, maintained in good repair, and kept clean.

SAFETY PRECAUTIONS:

1. When opening boxes, cartons, crates, etc., remove nails, do not bend them down. Beware of broken glass.
2. Locate the heavier and bulkier materials on the lower shelves. Avoid storage on top of cabinets or other high storage units.
3. Food containers should be covered except when in actual use or service.
4. Food containers become contaminated through wire, splinters, and dirt if not opened properly.
5. Know where your firefighting equipment is located. Items should not be stored where they would be in the way when equipment is needed for emergency use. Flammable cleaning materials or other materials should be placed in specified lockers or in approved safety cans. Store only on lower shelves.
6. Maintain good housekeeping so as to reduce the hazard of fire and other accident hazards. Place stores so that they do not protrude into aisles from bins and shelves.
7. Be sure light bulbs are guarded and that materials are no closer than 18 inches to any bulb.
8. To avoid toppling and damage to cases and products, do not stack cases too high.
9. Use shelving of sturdy construction.
10. Storerooms should be properly ventilated and smoking prohibited.

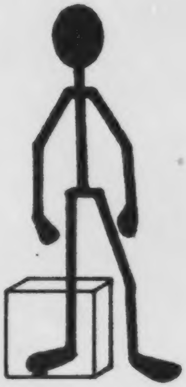
11. When lifting, keep back straight, bend knees and let leg muscles do the work. If load is too heavy for one person to manage, ask for assistance.

12. Use adequate and safe ladders; avoid overreaching to get objects.

LIFTING METHODS

Purpose: To prevent people from using improper lifting techniques and injuring themselves.

LIFTING TECHNIQUE

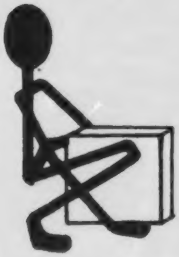


1. The Feet

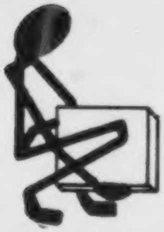
Feet should be parted, with one foot alongside the object to be lifted and one behind. The feet comfortably spread give greater stability and the rear foot is in position for the upward thrust of the lift.

2. The back

Use the sit-down position and keep the back straight. But remember that straight does not mean vertical. A straight back keeps the spine, back muscles and body organs in correct alignment. It minimizes the compression of the abdominal organs that can cause hernia.



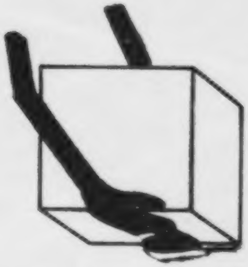
LIFTING TECHNIQUE

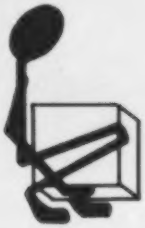


3. Tuck in the chin so the neck and head continue the straight back line. Tucking in the chin helps keep the spine straight and firm.

4. The palm

Gripping with the palm is one of the most important elements of correct lifting. The fingers and the hand are extended around the object to be lifted--using the full palm. Fingers alone have very little power--the strength of the entire hand is needed.

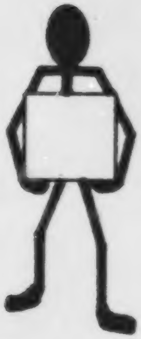




5. Arms and elbows

Draw the load close with arms and elbows tucked into the side of the body. When the arms are held away from the body they lose much of their strength, and because the weight is not fully supported on the spinal axis, back strain can result.

LIFTING TECHNIQUE



6. Body weight

The body should be positioned so that its weight is centered over the feet. This provides a more powerful line of thrust and also ensures better balance. Start the lift with the thrust of the rear foot.

FOOD COSTS AND THE 40 THIEVES

THIEVES

Purchasing

1. Purchasing too much.
2. Purchasing for too high a cost.
3. No detailed specifications--quality, weights, types.
4. No competitive purchasing policy.
5. No cost budget for purchasing.
6. No audit of invoices and payments.

Receiving

7. Theft by receiving man.
8. No system for credits for low quality, damaged or goods not received.
9. Lack of facilities such as scales.
10. Perishable foods left out before storing.

Storing

11. Foods improperly placed in storage (e.g., fats, eggs, milk, near strong cheese and fish).
12. Stored at wrong temperatures and humidity.
13. No daily inspection of stored goods.
14. Poor sanitation in dry and refrigerated storage areas.
15. Product prices not marked in storeroom.
16. No physical or perpetual inventory.
17. No policy of one man's responsibility for food storage and issues.

Issuing

18. No control or record of foods issued from storeroom.
19. No forced issues.

Preparing

20. Excessive trim of vegetables and meats.
21. No check on raw yields.
22. No use of end products for production of low cost meals.

Production

23. Overproduction, overproduction, overproduction!
24. Using wrong methods of cooking.
25. Cooking at wrong temperatures.
26. Cooking too long.
27. No scheduling of foods to be processed (too early, too late).
28. No use of standard recipes.
29. Not cooking in small batches.

Service

30. No standard portion sizes.
31. No standard size utensils for serving.
32. No care of leftovers.
33. No record of food producing and leaving production area.
34. Carelessness (spillage, waste, cold food).

Sales

35. Food taken out of building.
36. Unrecorded sales and incorrect pricing, not charged, or cash not turned in.
37. No food popularity index or comparison of sales and inventory consumption.
38. No sales records to detect trends.
39. Poor pricing of menu items.
40. Employee meal costs--overproduction, unauthorized meals.

QUANTITY FOOD PRODUCTION

VIII. Quantity Food Production

Page

Synopsis 381

Performance Competencies 382

Food Preparation Terms 383
    Trade Vocabulary

Measuring Skills 387
    Abbreviations
    Metric Equivalents
    Trade Vocabulary

Quality Control 395
    Trade Vocabulary

Techniques 401
    Time and Energy Saving
    Labor Saving
    Trade Vocabulary

Recipes 409
    Parts and Information Included
    Use
    Filing
    Tasting Food
    Altering Recipes
    Trade Vocabulary

Page

Portioning 417
    Portion Control
    Trade Vocabulary

Convenience Foods 423
    Definition and Description
    Basic Mix
    Regional, Foreign, and Ethnic Convenience Foods
    Trade Vocabulary

Quantity Cookery: Breads 433
    Quick Breads
    Yeast Breads
    Convenience Breads
    Crumbs
    Trade Vocabulary

Quantity Cookery: Eggs 441
    Trade Vocabulary

Quantity Cookery: Cereals and Pasta 449
    Cereal
    Pasta
    Trade Vocabulary

Quantity Cookery: Sandwiches 455
    Cold Sandwiches
    Hot Sandwiches
    Trade Vocabulary

Page

Quantity Cookery: Cheese 463
- Trade Vocabulary

Quantity Cookery: Spicing and Flavoring 467
- Trade Vocabulary

Quantity Cookery: Desserts 471
- Pastry
- Fillings
- Pies
- Cakes
- Frosting
- Cookies
- Milk Desserts
- Gelatin Desserts
- Trade Vocabulary

Quantity Cookery: Meats, Poultry, and Seafood 485
- Dry Heat Cookery
- Moist Heat Cookery
- Care and Storage
- Trade Vocabulary

Quantity Cookery: Salads and Salad Dressings 495
- Trade Vocabulary

Page

Quantity Cookery: Sauces, Gravies, and Soups 503
    Sauces
    Gravy
    Soups
    Trade Vocabulary

Quantity Cookery: Vegetables and Fruits 511
    Cleaning
    Waste Prevention
    Holding
    Trade Vocabulary

Quantity Cookery: Garnishes and Appetizers 523
    Garnishes
    Appetizers
    Trade Vocabulary

Quantity Cookery: Beverages 531
    Trade Vocabulary

QUANTITY FOOD PRODUCTION

SYNOPSIS

Food production is a major function of the commercial food service establishment. A commercial establishment must serve high quality food at a reasonable and profitable price. It is the responsibility of the food service employee to recognize the factors which ensure that the food is superior and the establishment's reputation is sound. A patron will recommend an establishment if the food is attractively prepared and garnished.

The food service employee can succeed if she/he is able to use standard recipes; knows the terms, measures, and equivalents used in recipes, and provides the consumer with consistent and uniform servings. Uniform portions ensure that the food will be properly served, and standard recipes ensure that the food will be of the same quality each time it is prepared. Moreover, standard recipes aid management in controlling costs. In health care facilities, standard recipes provide nutritive content, an important factor in the health of a patient.

The use of production techniques which save time and energy can also save the food service establishment money. Management may initiate time and motion studies to find ways to simplify work, but the conscientious food service employee can find and initiate ways to save time and energy.

In quantity cookery, skill is directly related to employability. Food service establishments produce a variety of foods; therefore, they need employees who have a variety of skills used in the general production of food and in the preparation of specialized products. For example, since convenience foods are becoming very popular, a knowledge of their preparation can aid the student in finding and keeping a job.

PERFORMANCE COMPETENCIES

The student will demonstrate the ability to efficiently prepare and serve quality food products using commercial equipment.

The student will maintain only the acceptable standards for the selection of food items.

The student will adopt only the proper methods of preparing food.

FOOD PREPARATION TERMS

COMPETENCIES The student will be able to:
- define common food production terms.
- describe procedures indicated by food production terms.
- follow procedures indicated by food production terms.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Many recipes contain one or more terms which indicate that certain techniques are to be used; therefore; food service employees must understand all cooking terminology.	Define common food production terms	View slides depicting terms used in quantity food preparation. As the teacher shows the slides an additional time, try to name each production term. View a filmstrip on cooking terms. Which terms were unfamiliar to you? View those sections of the filmstrip once more as the instructor gives additional information. Study handout sheets on baking and pastry, meat cookery, salad, vegetable and fruit preparation, and surface cooking terms. Read a recipe for biscuits, muffins, or other simple food. Underline all terms which tell you how to make the product. Name the cooking terms or techniques illustrated on transparencies as the instructor shows each on the overhead projector.		

FOOD PREPARATION TERMS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To be a successful food service employee, one must master specific cooking techniques. These techniques require a certain degree of skill.	Describe procedures indicated by food production terms	Refer to a recipe in which cooking terms are underlined. Explain the terms to the class and what equipment or cooking surface is used. Select from a box one cooking term to illustrate for the class. Use proper equipment and explain the process.		
	Follow procedures indicated by food production terms	Select from a list of the most unfamiliar terms at least two to actually demonstrate to the class. Examples: fricassee, au gratin, julienne, marinate. Perform tasks indicated by food production terms as needed during food service lab. Play "Match Up" by dividing into teams. Each team will attempt to match flash cards of terms and the meanings before the other teams can. Each team will be given two sets of cards. Cooking terms will be written on cards of one color and the meanings of each cooking term will be written on cards of a different color. All members of a team will work with other teammates to match terms and their definitions. Use classroom tables to spread out the cards to do the matching process. The		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		team which correctly matches the most terms and definitions in the least time wins. Play "Name That Term." As the teacher calls out definitions of cooking terms, write down the terms defined. Students will receive one point for each correct answer. (If students have difficulty spelling terms, alphabetized lists of the terms may be provided.) Call out the definition as another student or the instructor displays a flash card with the cooking term written on it.		

TRADE VOCABULARY

Meats

- baste
- braise
- bread
- broil
- brown
- crumb
- dredge
- dust with flour
- filet
- flake
- fricassee
- grill
- grind
- roast
- sear
- season
- stuff
- truss

Salads, Fruits and Vegetables

- au gratin
- blanch
- chill
- chop
- cut
- dice
- grate
- hull
- julienne
- marinate
- mash
- mince
- mold
- pare
- peel
- pit
- puree
- scallop
- thaw
- unmold

Surface Cooking

- boil
- coat the spoon
- cool
- deep fat fry
- dip
- fry
- melt
- pan broil
- poach
- saute
- scald
- simmer
- steam
- steep
- stew

Mixing and Preparation

- beat
- blend
- brush
- cream
- cut and fold
- cut in
- dilute
- dissolve
- dot
- flute
- fold
- knead
- leaven
- level off
- mix
- stir
- toast
- whip

MEASURING SKILLS

COMPETENCIES The student will be able to:

give examples for the use of food production measuring equipment.
cite steps in using the measuring equipment used in food production.
experiment using proper measuring techniques.
perform assigned tasks using measuring equipment.
react to situations involving lack of accuracy in measuring ingredients.
identify abbreviations for measurements in food production.
convert fully written out measurements to abbreviations.
identify equivalent measures.
give examples of equivalent measures.
relate the use of equivalents to saving time and energy.
discuss reasons why accurate measuring is important in promoting the acceptability of food products.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Consistency and uniformity in food products are achieved through the use of standardized recipes and measuring equipment.	Give examples for the use of food production measuring equipment	Draw a card which indicates a certain amount of an ingredient to be measured. Explain to the class the equipment needed to measure that ingredient and explain the technique for using the piece of equipment.		
	Cite steps in using the measuring equipment used in food production	View a filmstrip or film on techniques for using measuring equipment. Note the following: Is flour usually sifted in commercial food production? What ingredients are usually packed down when measured? Why must measuring spoons of ingredients be leveled off? If a pan is used on a measuring scale, why must you		

MEASURING SKILLS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		note how much the pan weighs before adding the ingredients? Which is more accurate, weighing ingredients or measuring ingredients in cups and spoons? Why must measurements be exact?		
	Experiment using proper measuring techniques	Practice measuring various ingredients listed on a check sheet. Work with a partner and check one another's accuracy.		
		Make a baked item such as cake, brownies or cookies using a commercial metric recipe.		
In preparing food products, using the proper amount of an ingredient is as important as selecting the correct type of ingredient.	Perform assigned tasks using measuring equipment	Take charge of the ingredient room during labs on a rotation basis. Measure ingredients for foods prepared in the foods lab.		
		Prepare mixes for one or more of the following: brownie mix, pie crust mix, or pancake paste. Use mixes as needed.		
	React to situations involving lack of accuracy in measuring ingredients	Discuss case studies on inaccuracy of ingredient measurement in food production.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify abbreviations for measurements in food production	Name the cooking measurement as the instructor flashes a card with the abbreviation written on it. Study a handout sheet on abbreviations of measurements. Write the abbreviations for each measurement term underlined in the recipe provided on a handout. Look through recipes and underline the abbreviations used. Take part in an "Abbreviation Relay." Divide the class into two teams, and line up in two rows in front of the blackboard. Two identical lists of abbreviations of cooking measurements are written on the board. When "start" is called, the team members attempt to write out each word in full, one at a time. As the game progresses, team members may attempt a new abbreviation or correct what a teammate has done. When a team feels it has completed the list correctly, the members can call time. In scoring, a +1 is given for each correct answer, and a -1 is given for each incorrect		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		answer. In the second round the measuring terms are written in a list, and the team members attempt to write the correct abbreviations for the measuring terms.		
	Convert fully written out measurements to abbreviations	Employ the use of abbreviations for measurements in food production. Prepare food items accurately using a recipe in which measuring terms are abbreviated.		
Using equivalent measurements and weights saves time when preparing food in large quantity.	Identify equivalent measures	Observe a flannel board demonstration on equivalent measurements. Why is knowing equivalents important in commercial foods? In multiplying or dividing recipes? How would metric measures simplify measuring? Match up flash cards of measurements and their equivalents.		
	Give examples of equivalent measures	Study a sample conversion chart for changing ingredients from measures to weights. Find equivalents for ten ingredients using the chart. Study a display of various size milk cartons. Rearrange the cartons to depict equivalent		

MEASURING SKILLS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		measurements. Examples: two pint cartons would be grouped with one quart carton.		
	Relate the use of equivalents to saving time and energy	Prepare a demonstration on how the use of equivalents in measurement can save time and energy. Have a classmate with a stop watch time you as you measure four one cup measures of water and as you measure a one quart measure of water. Have the class note the water level as you pour the four cup measures of water and the one quart measure of water into containers of the same size. What does the same water level in each container indicate? Study a display of various amounts of common foodstuffs (bread, butter, milk, sugar) measured in metric and English measures.		
	Discuss reasons why accurate measuring is important in promoting the acceptability of food products	Why must a product be acceptable and palatable to the consumer if it is to be utilized by the body? How can one ensure acceptability?		
		NOTE TO TEACHER:		

MEASURING SKILLS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Since conversion to the metric system is inevitable, the student should become totally familiar with that system of measuring. To avoid confusion, the metric system of measuring should not be taught as equivalents to the English system, rather, as a separate measuring system.		

TRADE VOCABULARY

measurement
liquid ingredients
dry ingredients
teaspoon
cup (liquid, dry)
metal spatula
eye level
flat surface
lip of a cup
ounces
tablespoon
pint
pound
fraction
marker lines
level
heaping
specific
powdered sugar
granulated sugar
sift
brown sugar
wax paper
recipe
equal
method

CASE STUDIES ON MEASUREMENTS

Kathy was to measure the ingredients for ten loaves of French bread which were to be served with an Italian dinner. Since so much flour was needed (11 pounds and 4 ounces) she placed a large counter pan on the food scales and began pouring flour into the pan until the scale showed 11 pounds and 4 ounces. Later when the baker was mixing the yeast dough she complained that the dough was too sticky. What was the cause of the stickiness? What did Kathy do wrong when measuring the ingredients? Do you think the baker was able to correct the mistake? How?

The class had a special order for six German sweet-chocolate cakes. John measured out the ingredients for the recipe which included one pound of shortening, two pounds of sugar, ten eggs, six ounces of German chocolate, one cup of water, 2 teaspoons of vanilla, 2 cups of buttermilk, 1 pound of cake flour, 1 teaspoon salt and 2 teaspoons of soda. He measured 2 tablespoons of soda instead of 2 teaspoons of soda for each cake. What effect do you think this mistake had on the cakes? Try to estimate the money which was wasted on the ingredients which were used for the cakes. How would this compare to making a mistake on a recipe for only one cake? Why is it important to double check measurements in quantity cookery? How much wasted lab time would be involved in that one little mistake?

QUALITY CONTROL

COMPETENCIES The student will be able to:

- discuss the nutritional importance of attractive food.
- identify factors related to high quality food production.
- give examples of factors contributing to quality.
- relate techniques of food production to quality.
- apply standards of quality to food production.
- adopt standards of quality.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Attractive foods encourages consumption.	Discuss the nutritional importance of attractive food	As a class, retell the importance of the attractiveness of foods which promotes consumption of these foods which in turn allows the body to utilize them.		
By using the proper methods of food preparation and by adopting attractive serving methods, one can produce superior, high quality food items.	Identify factors related to high quality food production	Visit a grocery store and look at fruits, vegetables, and meats. Listen as the produce manager and meat manager describe qualities to look for in fresh produce. After your return to the classroom, name as many factors as you can which relate to quality food production. Observe the quality of food in food service establishments as you visit them and eat out. Describe the quality of food to the class. As a customer, comment on whether you would choose to eat there again.		

QUALITY CONTROL

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		View a display of baked apples or some other easy to prepare fruit. Note the quality of each serving: One is burned; one isn't cooked thoroughly; one has some of the syrup dripping from the side of the dish; one still has seeds; one is just a mass of pulp; one is attractive and tasty looking. What is wrong with each portion? Visit a packing house and listen to a resource person discuss quality of meats. Observe samples of different qualities. Discuss the following topic: "What makes a high quality food product?" Is it a clean sanitary food? A properly prepared food? A food that is served in an attractive manner? Define the "perfect" hamburger. Compare the definitions of each class member. As each is discussed, check with the other members to see if they would be satisfied with that type of hamburger. Why does quality vary from one food service establishment to another? Is our own idea of perfect the only way to do things? Why is it important to follow the recipes developed by the restaurant where you are employed?		

QUALITY CONTROL

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Customers are satisfied when they find variety, taste, flavor, and attractiveness in the food being served.	Give examples of factors contributing to quality	Name the overall qualities customers look for in the foods they choose to eat when dining out as the instructor lists them on the board. Select one food and describe to the class the qualities customers might expect. Examples: bread, pie, meat dish, salad, and cooked vegetable. Use cardboard food models and arrange them on a plate in an attractive manner. Line up all the plates and judge the plates? Which is the most attractive? Why? Share ideas on how to improve the remaining plates. Summarize the remarks of a cafeteria manager regarding his/her policy on garnishes and explain to the class how the purchase of garnishes such as olives, parsley, cherries, or whipped topping actually pay for themselves in increased sales.		

QUALITY CONTROL

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To obtain regular customers, one must achieve consistency of appearance and flavor in the food served.	Relate techniques of food production to quality	Conduct an experiment to show how food preparation technique affects quality. Divide the class into several groups. Each major group will select a specific food to prepare. Half of the group will follow the directions exactly; the other half of the group will do the preparation incorrectly. Example: Prepare frozen peas incorrectly by not measuring water; by starting the peas in cold water; by cooking for a longer period of time than called for. Prepare another box of frozen peas following the directions carefully.		
	Apply standards of quality to food production	Divide into pairs. Each pair will prepare the same recipe for a baked product. Display finished products and compare differences. Select the most standard finished product according to characteristics of quality.		
An eye appealing plate arrangement and the use of garnishes can greatly contribute to customer satisfaction.	Adopt standards of quality	Initiate a visual judging of quality. Remove servings of substandard foods from the serving line or take steps on your own to improve its quality or appearance.		

656

657

TRADE VOCABULARY

consistency
texture
garnish
aroma
variety
plate arrangement
flavor
eye appeal
portion control

WHAT DO YOU LOOK FOR WHEN YOU EAT OUT?

How important is it that the . . .	Very Important	Somewhat Important	Not Important
Host/hostess smiles and says "hello" when you arrive.			
Table is clean and set before you're seated.			
Floor or carpet is spotless.			
Tables are spaced far enough apart so other people cannot hear you talking in a normal voice.			
Waiters/waitresses are neat and well-groomed.			
Menu describes the ingredients in all foods listed.			
Food looks appetizing when it is served.			
Waiter/waitress takes food back to the kitchen without complaint if you request it.			
Manager is available for complaints, if you have any.			
Trays are bussed quietly from the dining room.			
Employees seem to be friendly and work well together.			
Check is clearly written so you can review it if you want.			

1. Place an X at the rating which best describes your opinion.
2. Study over your rankings, then determine how you would describe yourself as a customer.
   - ___ More particular than most people
   - ___ Just about as particular as most people
   - ___ Much less particular than other people
   - ___ Most interested in food than in service
   - ___ Equally interested in food and in service
   - ___ More interested in good service than in food

TECHNIQUES

COMPETENCIES The student will be able to:

- list ways to save time and energy in food production.
- name labor saving equipment.
- depict time and energy saving techniques.
- practice using time and energy saving techniques.
- gain skill in using time and energy saving techniques.
- choose procedures which save time and energy.
- analyze techniques used in performing specific tasks.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Time and energy saving techniques reduce fatigue as well as production costs.	List ways to save time and energy in food production	Listen to a panel of food service workers describe ways to save time and energy in food production. Make a list of the panel's suggestions. Why is efficient use of time and energy important to the employer? What may result if an employee cannot produce the minimum volume of work? View transparencies showing normal and maximum working areas. Why should tools and supplies be placed within these areas?		
Carefully and precisely engineered equipment can also save time and energy.	Name labor saving equipment	Brainstorm to list labor saving equipment and the tasks each item performs. What accessories for equipment are available to perform additional tasks?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
If efficient techniques are employed, more work can be done in less time.	Depict time and energy saving techniques	Make posters showing ways to save time and energy. Include such ideas as arranging work within the proper working area, pre-positioning tools and supplies so they are ready to grasp and in the appropriate order, minimizing body movements, using both hands whenever possible, disposing of finished work by dropping it to its destination, varying position to prevent fatigue, using proper illumination for work, and minimizing holding of work by either hand. Trace the steps taken by a food service employee on a diagram of the establishment as the teacher reads a detailed description of her/his actions. Note the distance she/he walks. Trace the employee's steps again as she/he performs the same task using an improved method. Note how much less she/he walks. How can time and energy management improve job performance?		
	Practice using time and energy saving techniques	Imitate procedures demonstrated by teacher for performing various tasks. How do these procedures save time and energy?		

TECHNIQUES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Gain skill in using time and energy saving techniques	Use time and energy saving techniques each time a task is performed to increase your skill and speed. Follow instructions for performing tasks the most efficient way using the appropriate equipment.		
Production costs rapidly increase when employees do not engage in the necessary amount of work.	Choose procedures which save time and energy	Look for ways to save time and energy in performing food service tasks. Explain your idea to the teacher. If the teacher approves, demonstrate the time and energy saving procedure to class.		
	Analyze techniques used in performing specific tasks	Visit a commercial food service establishment. Observe techniques used by one employee. Describe time and energy saving techniques you observe. Note any signs of wasted time and energy. Share your observations with the class. Observe a student performing a task in the food service lab. Note use of time and energy saving techniques. Note time and energy wasting practices.		

TECHNIQUES

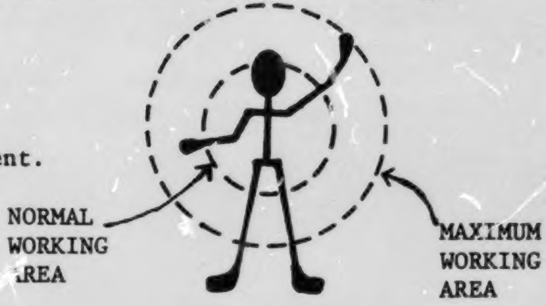
Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Collect ideas for saving time and energy in food service jobs. Observe and interview food service employees. Ideas also may be obtained from films, resources, and experience.		

THE 5 STEP PLAN FOR WORK SIMPLIFICATION

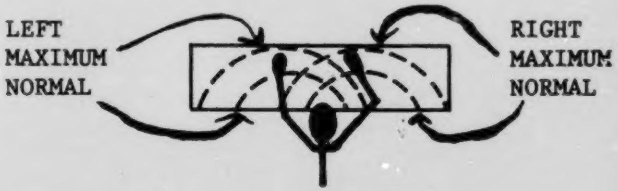
A. Select the job to be improved
One which you feel takes you too long, makes you too tired, or uses up too much energy.

B. Break down the job operation
List all details exactly as you do the job at present.
1. Get ready: collection of tools and equipment.
2. Do: bodily motions you use to do the job.
3. Clean up: the cleaning and putting away of equipment.

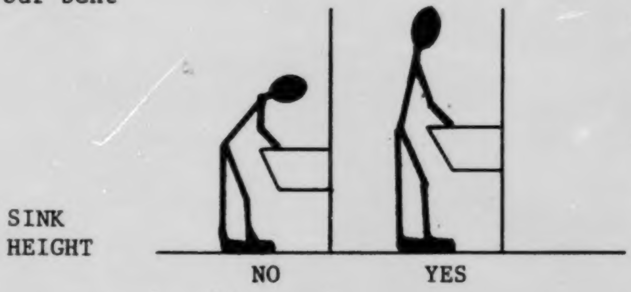
C. Question the job and equipment:
1. WHY is it necessary?
2. WHAT is the purpose?
3. WHEN should it be done?
4. WHERE should it be done?
5. HOW is the "best way" for me to do it?


NORMAL
WORKING
AREA
MAXIMUM
WORKING
AREA

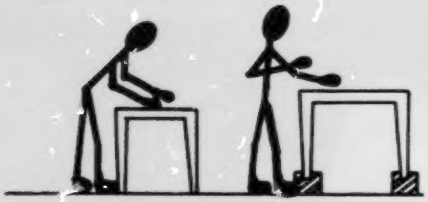
D. Develop the new method:
1. Eliminate unnecessary details.
2. Combine motions and activities.
3. Rearrange sequence of job.
4. Simplify all necessary details:


LEFT
MAXIMUM
NORMAL
RIGHT
MAXIMUM
NORMAL

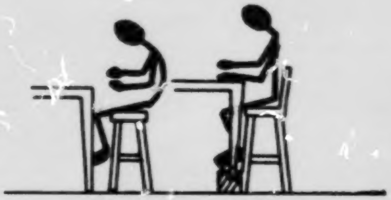
(a) Make work easier with correct counter height and normal work areas.
--Correct counter height for standing (as sink) should be 2" below the height from floor of your bent elbow.


SINK
HEIGHT
NO
YES

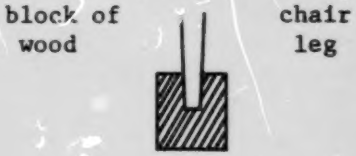
--To find the proper height for your work chair, measure the distance from your elbows to the floor while you stand and also while you sit. The distance from floor to elbow when you stand, minus the distance from floor to elbow when you sit equals the amount to be added to the present height of chair. HOW? like this:



WORKING TABLE HEIGHT



SITTING



(b) Pre-position equipment in work areas at the point of first use.
(c) Use gravity feed drops (sugar, flour).
(d) Use feet whenever possible (opening and closing cupboards, etc.).
(e) Make motions simultaneous and productive--use both hands, arms.
(f) Use smooth continuous motions--no jerking.

E. Apply New Method
1. Rearrange tools and equipment.
2. Readjust working heights and areas.
3. Set up working areas: Dishwashing area
   Cooking area
   Mixing area
   Storage area
   Rest area (relaxation)
4. Throw away things you don't use.

TRADE VOCABULARY

time saving techniques

energy saving techniques

labor saving equipment

accessories

normal working area

maximum working area

work simplification

RECIPES

COMPETENCIES The student will be able to:
define recipe.
name the parts of a recipe.
cite information included in a recipe.
explain the purpose of the information included in a recipe.
state the procedures for using a recipe.
explain how to use a recipe.
use a recipe correctly.
endorse the correct procedures for using a recipe.
cite the procedures for filing recipes.
explain the procedures for filing recipes.
demonstrate ability to locate and file recipes.
state the procedure for tasting food.
illustrate the procedure for tasting food.
comply with rules for tasting food.
cite the procedures for altering recipes.
solve problems in increasing and decreasing recipes.
explain the procedures for altering recipes.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Standardized recipes aid in control of quality, quantity, and costs.	Define recipe	Brainstorm to define "recipe." Is your definition similar to the following: "A recipe is a formula for making a dish in cookery; a means prescribed for producing the desired result." What is meant by the term "standardized recipe"? Why do you think standardized recipes are used in food service?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Name the parts of a recipe	Study several quantity recipes. What two parts does each include? (Ingredients and description of the method for putting them together.)		
	Cite information included in a recipe	Locate the following information on the recipe shown on a transparency: (1) the name of the dish to be prepared, (2) the recipe number if a number has been assigned, (3) the yield or number of portions the recipe will produce, (4) a list of all ingredients in the order they are used including the type or form required (melted, diced) and the weight or measurement for each ingredient, (5) each step in combining ingredients in order of performance, including temperature and time, (6) description and size of utensils and containers to be used, and (7) method of service. Find the same information on another recipe. Make a list of information included in a recipe.		
	Explain the purpose of the information included in a recipe	Discuss how the information included in a recipe is used by the food service employee. What is meant by "yield"? Why are directions for combining ingredients given? How could		

RECIPES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		knowing the size utensil or container to use save time? What part of a recipe tells you how to prepare the food?		
To ensure a quality product, follow the recipe carefully.	State the procedures for using a recipe	View a film on how to use a standardized quantity recipe. List the steps outlined in the film. Why is it important to measure and weigh ingredients carefully? Study a handout on how to use a recipe.		
	Explain how to use a recipe	Describe in your own words how to use a recipe. Study recipes shown on transparencies. Determine the foods and equipment needed to prepare each. Discuss any terms you do not know. Discuss the directions for one recipe in detail. Role play a cook preparing the recipe. Go through all the steps in using the recipe correctly. Read the recipe. Ask questions about words you do not know. Pretend to get out food. Get out equipment. Go through motions of measuring ingredients and following directions. Let teacher and classmates suggest ways to improve.		

RECIPES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Use a recipe correctly	Prepare a simple recipe using correct procedures. Look for ways you can do better next time.		
	Endorse the correct procedures for using a recipe	Observe the correct procedures for using recipes throughout the year without being reminded. Never begin preparing a recipe without reading it first. Do your best to prevent recipe failures caused by careless measurement. Always get out food and equipment before you begin.		
	Cite the procedures for filing recipes	Watch as the teacher points out where recipes are kept in the kitchen and describes how they are filed. Into what categories is the file divided? How can you locate the recipe you need in the file? What care should be given to recipe cards before they are put back in the file? How should you put recipes back in the file?		
	Explain the procedures for filing recipes	Describe how to find and file recipes to a partner as if he/she were a new food service employee. Practice locating recipes in the recipe file using a list provided by the teacher.		

RECIPES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Demonstrate ability to locate and file recipes	Divide into two teams to play a cook's relay game to practice locating and filing recipes. Teacher will provide two file boxes of recipes and a stack of cards which each give the name of one recipe. The first member of each team will proceed from starting line to recipe file and locate the recipe named on the top card in the stack. Match the card and the recipe and place on the table. Return to "start." The next teammate may then proceed to the file box to locate the next recipe. The team which locates the most recipes correctly or who finishes first wins. Repeat to refile the cards. Locate and file recipe cards as needed during each food service lab.		
	State the procedure for tasting food	Watch as the teacher demonstrates the correct procedure for tasting food. Why were two spoons used? How was food transferred to the second spoon? Was the second spoon ever placed in the food?		
	Illustrate the procedure for tasting food	Make a bulletin board to illustrate the correct procedure for tasting food.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Comply with rules for tasting food	Follow correct procedure for tasting food without being reminded.		
Only careful adjustments should be made in the yield of quantity recipes.	Cite the procedures for altering recipes	Listen as the teacher describes procedures for increasing or decreasing recipes. Why can't recipes simply be multiplied or divided as needed? Why should recipes be multiplied or divided only by two, then tested before increasing or decreasing again? What are essential ingredients? What are optional ingredients? How does changing optional ingredients affect the recipe? Study recipe cards showing amount of ingredients for several different yields. Which recipes should have been tested one or more times before arriving at the largest yield? Were all the ingredients multiplied by the same number to increase them to the next yield? Point out any measurements which were not multiplied exactly. Note: Common sense should be applied in rounding off small amounts of ingredients that will not affect the final product. Listen as your teacher explains why all ingredients may not be increased the same		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		amount. Why may ingredients which make up the sauce portion of a casserole need to be decreased when the recipe is multiplied several times?		
	Solve problems in increasing and decreasing recipes	Practice increasing and decreasing the yield of recipes. Example: Multiply a recipe for 100 portions so it will yield 235 portions. Note which recipes should be tested before increasing to the yield desired.		
	Explain the procedures for altering recipes	Circle the essential and optional ingredients on a recipe. Who should make the final decision on any changes in a recipe?		

TRADE VOCABULARY

recipe
standardized
ingredients
volume
directions
yield
portion
essential ingredients
optional ingredients

HOW TO USE A RECIPE

1. Read the whole recipe before you start to prepare the food.
2. Know words and amounts before you begin. Ask questions, if necessary.
3. Get out all the food and equipment needed.
4. Weigh or measure all ingredients carefully.
5. Follow each direction in order.
6. Keep work area clean while you work.

684

PORTIONING

COMPETENCIES The student will be able to:

- define portion control.
- list tools used to portion various foods.
- cite procedures for portioning various foods.
- describe procedures for portioning specific foods.
- solve food portioning problems.
- practice portioning various foods.
- measure portions quickly and accurately.
- determine effects of careless portioning.
- choose portioning techniques which ensure equal servings to all customers.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Controlling portions helps control costs and produce customer satisfaction.	Define portion control	Visit the school cafeteria to observe ways various foods are divided into individual servings. How would customers react to servings of different sizes which are the same price? What is portion control?		
Accuracy is achieved in portioning foods by the careful and proper selection and use of equipment.	List tools used to portion various foods	Observe a display of tools used in portioning various foods. List tools used in portioning. Name the portioning tools shown on a transparency.		

PORTIONING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The menu, the prices, the type of food service establishment, and the kinds of customers to be served determine the size of portions.	Cite procedures for portioning various foods	Watch slides on portioning various foods. Note procedures used for each food.		
		Watch demonstrations on portioning techniques. Where may the food service employee find portioning instructions? What foods may be preportioned? Name the steps in portioning specific foods? What tools are used for each? Where is portioning done?		
		Study the portioning instructions on recipes. Could you portion the food from the instructions given? If not, ask questions to clarify points you do not understand. Are diagrams included to show how the food should be placed on the plate?		
	Describe procedures for portioning specific foods	Draw a card naming a specific food to be portioned. Select the tools needed for portioning that food. Describe procedures for portioning the food to the class.		
		Make a chart listing portioning tools, the size of the tools, the amount held, the weight, and the suggested uses for portioning foods. Example: No. 20 scoop, 3 tbsp. 1 3/4-2 oz., sandwich filling, sauces. Post the chart in the food service lab for reference.		

PORTIONING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Make a display of pre-portioned foods. Include such items as individual packets of ketsup, jelly, salt, sugar, mustard, salad dressing, bread, cereal, milk, and crackers. Add pictures of foods which may be portioned during preparation such as custard, jello, muffins, and cupcakes.		
	Solve food portioning problems	Discover the number of portions which can be obtained in specific situations. Examples: How many 3 oz. servings can be obtained from a 10 lb. turkey roll? How many 2 1/2 oz. servings can be obtained from a 10 lb. 12 oz. hunter ham? How many 4 oz. servings can be obtained from an 8 lb./10 lb. roast of beef? How many 1 cup servings can be obtained from 4 gal. of soup? How many sandwiches containing 3 T. of filling each can be made from 2 quarts of sandwich filling? How many 1/3 cup servings can be obtained from 1 gal. of pudding? If 200 persons are to be served 20 pies, into how many pieces should each pie be cut?		
	Practice portioning various foods	Practice portioning various foods using a rotation chart. Be sure to gather all tools and dishes before beginning. Use a spatula to mark pieces of cake before cutting. (If an error		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		is made, smooth the icing and mark again.) Use a pie marker to mark pie or cut pie in half, then cut each half in five pieces. Portion condiments such as sugar, salt, pepper, jelly, mustard, and catsup. Portion butter using the butter cutter. Portion other foods as needed.		
Standard portions ensure consistent and uniform servings.	Measure portions quickly and accurately	Portion foods according to instructions on a recipe or from the teacher as needed when preparing and serving food.		
If food is carelessly portioned, food costs and customer dissatisfaction may result.	Determine effects of careless portioning	Brainstorm to determine effects of careless portioning. What may be the effect if fewer servings are obtained than planned? What may be the effect if the size of servings vary noticeably? How can inaccurate measurement in food preparation affect the number of portions obtained.		
Accuracy is essential in portion control.	Choose portioning techniques which ensure equal servings to all customers	Make a conscious effort to portion foods into servings equal in size. Follow portioning instructions carefully. Do not make exceptions in portion size for customers. Explain tactfully that this is the size serving to be served all customers and that there will not be enough food if larger servings are given.		

PORTIONING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Discuss why proper portioning is important in weight maintenance, eye appeal, and prevention of food waste.		

693

694

TRADE VOCABULARY

- scoopful
- portion scale
- scoops
- skimmer
- spatula
- level
- pie marker
- dippers
- butter cutter
- standard
- spoons
- tongs
- plastic gloves

CONVENIENCE FOODS

COMPETENCIES The student will be able to:

- define convenience foods.
- identify items that are convenience foods.
- describe convenience foods.
- identify procedures for preparation of convenience foods.
- depict a procedure for the preparation of convenience foods.
- state the advantages and the disadvantages of convenience foods.
- explain the reasons for using convenience foods.
- discover the difference in time in preparing convenience foods with preparing foods by traditional methods.
- identify the basic mix as a convenience food.
- utilize the basic mix as a convenience food.
- state the types of regional, foreign, and ethnic convenience foods available.
- prepare an assigned food product using convenience foods.
- perform specific tasks in food production utilizing convenience foods.
- display a desire to identify and correctly use convenience foods in food production.
- identify the importance of purchasing a nutritious and palatable convenience food.
- attempt to prepare regional, foreign, and ethnic convenience foods.
- experiment by using the various forms of regional, foreign, and ethnic convenience foods that are available.

CONVENIENCE FOODS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Food items that have been partially prepared before they are sent to the commercial food facility are known as convenience foods.	Define convenience foods	Listen to an illustrated lecture to learn the meaning of convenience foods. What is the difference in a convenience food and food prepared by a conventional method? In your own words, define a convenience food.		
Efficiency in food service is dependent upon one's ability to recognize convenience foods.	Identify items that are convenience foods	Study flashcards to learn the identity of convenience foods.		
		Make a bulletin board using the labels and pictures of convenience foods. Place the bulletin board in the foods lab for student reference.		
		Select picture cards illustrating convenience foods from the picture cards of food items.		
		Take a field trip to a restaurant or food service establishment which relies mostly on convenience foods. Name four convenience foods you saw used.		
	Describe convenience foods	Look at a display of convenience foods. Explain why each item is considered a convenience food.		

CONVENIENCE FOODS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify procedures for preparation of convenience foods	Watch a demonstration to learn the different procedures for preparation of convenience foods. What is meant by concentrated foods? Freeze dried foods? Dehydrated foods? Frozen foods? Mixes? Name one food which has been produced by each of the processes. What is the difference in prepackaged foods and preportioned foods? Have the students taste the foods. View a demonstration of the microwave oven showing the preparation of several different types of convenience foods. If there is not a microwave oven in the school or a nearby restaurant or institution, a representative from a major sales company could bring a microwave oven and demonstrate it to the class. List the advantages of using a microwave oven with convenience foods. Taste food cooked in the microwave oven. Match up cards of food items with cards stating the method of preparation. State the processed forms of a convenience food as the teacher reads the name of a food item. (Example: potatoes: frozen, canned, or dehydrated.)		

700

701

CONVENIENCE FOODS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Go on a field trip to a supermarket to view the various types of convenience foods and their methods of preparation. List three processes used in producing convenience foods.		
	Depict a procedure for the preparation of convenience foods	Make a poster to show a process used in preparing convenience foods. For example: frozen process would be illustrated with pictures of food items in frozen form such as waffles, T.V. dinners, vegetables, etc. Explain the poster to the class.		
	State the advantages and the disadvantages of convenience foods	Listen to an illustrated lecture to learn the advantages and the disadvantages of using convenience foods. In your own words, explain the advantages and disadvantages of convenience foods.		
		Write down the correct term--An A for advantage or a D for disadvantage--as the teacher reads a statement about convenience foods. One point will be given for each correct answer.		
	Explain the reasons for using convenience foods	View a chart as the teacher explains the reasons for using convenience foods. In your own words, give three reasons for using convenience foods.		

CONVENIENCE FOODS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Select from a box the name of a convenience food. Give two reasons why a food service establishment might use the convenience food. Watch a demonstration on preparing potatoes for French fries in the traditional method compared with using frozen French fries. Note the difference in preparation time. Explain the advantages and the disadvantages of the convenience potatoes. Why is it important to follow directions carefully in preparing convenience foods? Compare taste and nutritional value, preparation time, and cost.		
	Discover the difference in time in preparing convenience foods with preparing foods by traditional methods	Draw an assignment card and prepare the food item on the card. Keep a record of preparation time. (Half of the students will prepare convenience food items; the other half will prepare the same food item using the traditional method. Assignments might include cakes, frostings, pie crust, and pie filling using dried or canned sliced apple.) Discuss the difference in time used in preparation of the food items. Which method saves the most time? Why is it important to follow the directions in preparing the food? Compare food quality, nutritional value, time needed, and cost.		

CONVENIENCE FOODS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the basic mix as a convenience food	Watch a demonstration to learn the identity of a basic mix as a convenience food. Explain why a basic mix can be considered a convenience food.		
	Utilize the basic mix as a convenience food	Draw an assignment card. Prepare the assignment using the basic mix prepared by the teacher. Display finished product for class to view. Assignments might include small cakes, rolls, cookies, biscuits, and muffins made from the basic mix.		
	State the types of regional, foreign, and ethnic convenience foods available	Watch an illustrated lecture to learn the regional, foreign, and ethnic convenience foods that are available. Name four of these convenience foods. Take a field trip to a restaurant that relies heavily on ethnic convenience foods. Name three convenience foods that are used there. Give an example of a convenience food as the teacher calls out the name of a country, region, or group.		

CONVENIENCE FOODS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Prepare an assigned food product using convenience foods	Sign your name by one of the assigned tasks on the chalkboard. Select the convenience food needed for the assigned task and prepare it according to the directions. Assignments might include preparing breakfast items using convenience foods. Items may include orange juice (frozen concentrate), hot chocolate (powder mix), scrambled eggs (dried), pancakes (mix), waffles (frozen), and patty sausages of bacon (pre-cooked and frozen). Display the finished product for the class to view. Explain the type of convenience food used. Explain the advantages of using the convenience food.		
	Perform specific tasks in food production utilizing convenience foods	Draw an assignment card of a food item to be prepared. Select the correct convenience food product and follow directions to prepare the food item. Prepare and serve a meal consisting entirely of convenience foods.		
	Display a desire to identify and correctly use convenience foods in food production	Use convenience foods as assigned in the food service lab. Identify the correct form of a convenience food as it is needed in the food service lab.		

CONVENIENCE FOODS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Convenience foods can supply our bodies with essential nutrients needed for growth and health.	Identify the importance of purchasing a nutritious and palatable convenience food	View the labels found on several convenience food packages. Discuss present controversies concerning additives		
		NOTE TO TEACHER: There are many opportunities for enrichment activities in the following areas: food labeling, food preservatives, flavor chemistry, the history of microwave cooking, the growth of the convenience food industry, and the production processes for selected convenience foods.		
		Make a poster illustrating convenience foods available from a specific country. Display the poster in the foods lab.		
To ensure quality meals from convenience foods, one must follow the preparation directions exactly as stated.	Attempt to prepare regional, foreign, and ethnic convenience foods	Work in teams of two. Draw an assignment card and prepare the assigned convenience food. Assignments might include: enchiladas, tamales, minestrone soup, pizza, egg rolls, and Quiche Lorraine. Display prepared products for class to view.		

CONVENIENCE FOODS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Experiment by using the various forms of regional, foreign, and ethnic convenience foods that are available	Divide into groups of four. Prepare one form of a convenience food. For example: assigned forms of tamales may be canned, frozen and traditionally prepared. Display the completed product for the class to view and taste. Compare taste, nutritional value, time needed, and cost.		

TRADE VOCABULARY

convenience foods

prepackaged foods

preportioned foods

concentrated

freeze dried

dehydrated

mixes

canned foods

frozen foods

microwave oven

QUANTITY COOKERY: BREADS

COMPETENCIES The student will be able to:

- identify reasons why bread is an important part of the daily diet.
- identify food products that are considered quick breads.
- explain the steps in the preparation of quick breads.
- identify quality characteristics of quick breads.
- prepare quick breads using the correct techniques.
- improve speed in preparation of quick breads.
- cite food products that are yeast breads.
- list the steps in the preparation of yeast breads.
- explain the steps in the preparation of yeast bread.
- prepare a recipe for yeast bread.
- acquire skill in preparing yeast breads.
- list steps in heating convenience breads.
- practice heating convenience breads.
- name the uses for crumbs in food preparation.
- list the steps in making crumbs.
- practice making crumbs.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Bread products supply our bodies with essential nutrients needed for growth and health.	Identify reasons why bread is an important part of the daily diet	Discuss why quality, attractiveness, and palatability are important considerations in determining the usefulness of bread products to the body. See the following sections in Applied Nutrition: Essential Nutrients: Iron, the B Vitamins, and The Four Food Groups and Meal Planning: The Bread and Cereal Group.		

QUANTITY COOKERY: BREADS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Fresh baked breads may establish the reputation of a food service facility.	Identify food products that are considered quick breads	Look through recipe books available from the teacher. Find a definition of the term "quick bread." Read the definition to the class. Explain the book definition in your own words. View a bulletin board picturing a variety of quick breads. Name the types you know. Look through sample menus. Make a list of all breads you consider to be quick breads. Compare your list with the rest of the class.		
The skill of the individual baker determines the quality of a baked product.	Explain the steps in the preparation of quick breads	Watch a demonstration on preparation of quick breads. Note the ingredients needed for the recipe. Compare these ingredients with a display of ingredients for yeast breads. What items are different? Note the length of mixing time, the techniques for greasing the pan or muffin tin, the utensil used in filling the tin, and the amount of batter to be placed in the pan. Watch a demonstration on preparation of pancakes. Note the method used to determine 2 ounces of batter, the preparation of the griddle, the length of cooking time, the number of times pancakes are turned, and the		

QUANTITY COOKERY: BREADS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		method of holding pancakes if they are made up ahead of time.		
		Pantomime the steps in preparing quick bread recipes selected by the teacher.		
	Identify quality characteristics of quick breads	Study the score sheets for quick breads. Discuss what is meant by texture and tunnels. Use the muffins, biscuits, or loaf breads prepared in the teacher demonstration as examples for scoring.		
	Prepare quick breads using the correct techniques	Prepare a basic quantity biscuit recipe, a quantity muffin recipe, and a loaf type quick bread.		
	Improve speed in preparation of quick breads	Prepare a variety of quick breads to serve at a brunch for the parents or students. Serve with coffee and hot tea.		
		Prepare muffins to accompany a salad luncheon to be served to the faculty.		
		Take orders from teachers for quick bread loaves. Examples: banana nut, orange, cranberry, apricot, and nut breads. Bake, package, and deliver the orders.		

QUANTITY COOKERY: BREADS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Invite students from other units for a pancake breakfast. Take orders from each student. As the orders are turned in, use a pancake pitcher to prepare hot pancakes on the griddle.		
		Prepare coffee cakes to be served to teachers during an in-service day.		
	Cite food products that are yeast breads	View food models and pictures of various types of yeast breads.		
		Take part in a study tour of a local bakery. Observe the displays of yeast breads and view a demonstration on the preparation of various yeast bread products.		
		Tour a local doughnut shop to view the step by step procedure in doughnut production.		
	List the steps in the preparation of yeast breads	View a demonstration on preparation of yeast dough in quantity. Note the ingredients, the method weighing ingredients, and the techniques for mixing. Check yourself to see if you can name each step that the teacher demonstrates.		

QUANTITY COOKERY: BREADS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the steps in the preparation of yeast bread	Study photographs of steps in yeast dough preparation which have been prepared by the teacher. Examples: photo of student measuring the ingredients, checking the water temperature, mixing the yeast and water, adding the dry ingredients, and mixing with the dough hook. Describe to the class the importance of each step. Illustrate the importance of rising time for yeast dough by allowing a dough sample to set out several hours and to rise too much, allowing dough to rise over too hot a surface, and showing how the dough cooks on the bottom. Place rolls that have risen the proper amount of time in the oven with rolls that have been allowed to rise only half the time. Examine the baked products and compare their flavor.		
The quality of a baked product is also affected by accurate measurement of ingredients and skillful manipulation of the dough.	Prepare a recipe for yeast bread	Assist in the measuring of ingredients and the mixing of a quantity recipe for French bread. Each team of two will work to shape one loaf and take it through the baking process, including making the diagonal slits and glazing with egg white. Freeze the loaves and serve them with a spaghetti luncheon.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Prepare a refrigerator yeast roll recipe. The following day, shape the dough into crescent, fan, and cloverleaf shapes. Bake sample rolls for the class and freeze the remaining rolls for use later. Use a score sheet to evaluate the rolls.		
		Prepare a quantity recipe of doughnut dough. Cut out doughnuts and freeze overnight. Allow the doughnuts to rise and fry the doughnuts the following day, using an assembly-line procedure. Serve the doughnuts and coffee to teachers and office personnel.		
	Acquire skill in preparing yeast breads	Take orders for fresh loaves of bread, cinnamon rolls, Swedish tea rings, and jelly filled doughnuts.		
	List steps in heating convenience breads	Observe a demonstration on heating convenience breads. Recall and list each step demonstrated.		
	Practice heating convenience breads	Heat convenience breads as needed in the food service laboratory. Use techniques which prevent bread from becoming hard and dry.		

725

726

QUANTITY COOKERY: BREADS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Name the uses for crumbs in food preparation	Study recipes which use crumbs as an ingredient. Name the ways crumbs are used. Prepare a recipe in which crumbs are used.		
	List the steps in making crumbs	Watch the teacher make crumbs from old bread. Why is old bread used? How were the crumbs made? How are they stored?		
	Practice making crumbs	Make crumbs as needed in the food service laboratory.		

TRADE VOCABULARY

biscuit

muffin

dough

knead

yeast

flaky

rise

leavening

dissolve

lukewarm

shape

glaze

cinnamon

QUANTITY COOKERY: EGGS

COMPETENCIES The student will be able to:

- identify the nutritional contributions that eggs provide to the diet.
- cite the uses of eggs in meal preparation.
- identify the basic forms of eggs used in commercial food preparation.
- explain the procedures for using the various forms of eggs.
- apply procedures for using eggs in various forms.
- follow correct procedures in using various forms of eggs.
- identify popular egg dishes produced in food service.
- list the steps in preparing popular egg dishes.
- describe the steps in preparing basic egg dishes.
- carry out the proper techniques for preparing egg dishes.
- gain increased skill in the preparation of egg dishes.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Eggs supply our bodies with essential nutrients needed for growth and health.	Identify the nutritional contributions that eggs provide to the diet	Discuss the nutritional value of eggs to the diet. What are the advantages and disadvantages of eating eggs daily? See the following sections in Applied Nutrition: Essential Nutrients: Protein, Vitamin A, and Fat, and The Four Food Groups and Meal Planning: Breakfast, and also Special Nutritional Concerns: Vegetarian Diets.		

QUANTITY COOKERY: EGGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Eggs are a basic and important feature of the standard breakfast menu, and they are often included in luncheon and dinner entrees as well.	Cite the uses of eggs in meal preparation	View a flip chart or a series of transparencies which describe the many uses of eggs in food preparation. Examples: as a separate dish served at breakfast, lunch or dinner, in desserts and baked products, in sauces and dressings, as part of salads, or as a coating agent for baked or fried foods. Collect pictures of eggs used in meal preparation and place them on the bulletin board.		
	Identify the basic forms of eggs used in commercial food preparation	Observe a display of fresh, frozen (whole eggs, whites, and yolks), and dried or dehydrated eggs as the teacher gives uses for each variety. Examples: Fresh eggs are used in preparation of all types of baked products, and reconstituted eggs are used for scrambled eggs or in omelets. Interview the school cafeteria managers at home schools to learn the types of eggs used in their food preparation. Report your findings to the class. Study a flip chart which lists procedures for reconstituting dried eggs and equivalents for the reconstituted eggs.		

QUANTITY COOKERY: EGGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Watch a demonstration showing use of dehydrated eggs in the dried state and the proper method for reconstituting the dehydrated eggs. Watch as the proper method for cracking fresh eggs for use in cooking is demonstrated.		
	Explain the procedures for using the various forms of eggs	Divide into three groups. Each group will explain the steps in using one particular form of eggs. The fresh egg group will explain why a particular way of cracking eggs is considered better and why fresh eggs must be broken separately into a dish. The frozen and dehydrated eggs groups will explain why frozen and dehydrated eggs should be reconstituted only 25 portions at a time and why a quantity of dried eggs is mixed with a small quantity of water to make a paste before adding remaining water.		
	Apply procedures for using eggs in various forms	Prepare a recipe which calls for a large quantity of fresh eggs, such as a chiffon cake, quantity brownies, and freezer ice cream. Have your lab partner rate you on your technique for cracking and opening eggs.		
		Use frozen eggs in preparing sheet cakes for dessert in regular luncheon service for teachers.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Prepare a quantity recipe for jelly roll using reconstituted eggs. Have your teacher check your measurement.		
	Follow correct procedures in using various forms of eggs	Reconstitute the amount of dried eggs necessary for the production of baked products in the lab. Store in the refrigerator until the cook is ready for them.		
	Identify popular egg dishes produced in food service	View a bulletin board which pictures the following egg dishes: fried, scrambled, simmered or hard cooked, poached, shirred, and omelets. See how many names you can match with pictures. Discuss which egg dishes are most popular in your section of the country. Listen as students role play a waitress turning in breakfast orders. See how many varieties of eggs you can identify. Examples: "shipwreck and ham," two "sunny side up," "easy over" with sausage, and two "over hard" with bacon.		
	List the steps in preparing popular egg dishes	View a filmstrip or film on egg preparation. Note the following: the importance of heat control in cooking all varieties of egg dishes and the texture and appearance of egg dishes.		

QUANTITY COOKERY: EGGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Study handouts or a flip chart on specific steps for preparing each egg dish. Pay particular attention to the equipment needed and cooking temperatures. Watch as a chef from a local restrurant gives a step by step demonstration on how to prepare basic egg dishes.		
The cooking temperature and the length of cooking time determine the quality of cooked eggs.	Describe the steps in preparing basic egg dishes	Work with a partner to explain to the class the steps to follow in preparing one egg dish. As you prepare the dish, bring out the following information: Fried eggs: type of oil used, description of an egg skillet, method for putting egg into skillet, methods for busting eggs, and results of too much or too little fat. Scrambled eggs: use of different equipment such as steam jacketed kettle, double boiler, steamer or skillet; utensil used for beating the eggs; reason for adding milk; use of wooden spoon when stirring; texture and appearance of eggs when done; results of cooking at too high a temperature or for too long.		

QUANTITY COOKERY: EGGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Simmered or hard-cooked eggs: results of boiling eggs, use of wire basket if steam jacketed kettle is used, boiling water and cold water techniques for starting the eggs, necessity for cooling the eggs immediately, method for easy peeling, method for storing. Poached eggs: the use of salt and vinegar in the cooking water, water temperature, method for placing egg in the water, method for removing the egg and draining, techniques for preparing in quantity and reheating. Shirred eggs: the use of the special shirred-egg dish, method for finishing the eggs. Omelets: necessity for making to order, number of eggs used, techniques for tilting the skillet during the cooking process, method for removing omelet from the skillet.		
	Carry out the proper techniques for preparing egg dishes	Prepare a fried egg in an egg skillet and one on the griddle. Compare the appearance of the eggs. Take part in an egg cookery lab on a rotation basis. Those in group one will begin with fried eggs; group two, scrambled eggs; three, poached; four, an omelet. Members of the group will rate their own product. Upon completion of one variety, proceed to the next.		

740

741

QUANTITY COOKERY: EGGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Gain increased skill in the preparation of egg dishes	Prepare short order breakfasts for students enrolled in the vocational program. Prepare a brunch or luncheon for members of the advisory council. Prepare such egg dishes as Eggs Benedict or omelets. Prepare deviled eggs to be served cafeteria style with salads. Prepare hard cooked eggs for use in salads.		

TRADE VOCABULARY

eggs

white

yolk

dehydrated

dried

tough

scrambled

omelet

poached

QUANTITY COOKERY: CEREALS AND PASTA

COMPETENCIES The student will be able to:

identify the nutritional contributions cereals and pasta provide to the daily diet.
identify varieties of cereals prepared in commercial food establishments.
list the steps in cereal preparation.
explain the steps in cereal preparation.
apply the proper techniques in cereal cookery.
acquire additional skill in cereal preparation.
identify foods that are considered pasta.
illustrate the varieties of pastas available.
cite the steps for cooking pasta.
explain how to prevent poor pasta products.
follow the correct procedures for cooking pasta.
acquire additional skill in pasta cookery.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Cereals and pasta supply our bodies with essential nutrients needed for growth and health.	Identify the nutritional contributions cereals and pasta provide to the daily diet	Discuss cereals in relation to cholesterol in the diet. What are the advantages of substituting cereal for eggs at breakfast? Discuss fiber content and other nutritional benefits. See the following sections in Applied Nutrition: Essential Nutrients: Iron, the B Vitamins, Protein, and The Four Food Groups and Meal Planning: The Bread and Cereal Group.		

QUANTITY COOKERY: CEREALS AND PASTA

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Cereals are popular breakfast items in commercial food facilities.	Identify varieties of cereals prepared in commercial food establishments	Study a display of popular cooked cereals served in restaurants. Watch as the teacher groups the displayed cereals into the following categories: fine granular, coarse granular, flaked grains, whole grains. Poll your class and find the most popular cereal.		
	List the steps in cereal preparation	Look at the labels on the cereal containers carefully. Which cereals are quick cooking or instant varieties? Study a flip chart which lists the following basic points in cereal cookery: Use a heavy pot, steam kettle, or compartment steamer; pour measured amount of cereal into boiling water (except for fine granule cereals which must be mixed with cold water first); stir for a short time to prevent lumping; follow directions on the package for the amount of water and cereal and the cooking time; cook in as small quantities as possible; remove rice from heat when done to prevent a gummy product.		
	Explain the steps in cereal preparation	Select one cereal box from a paper bag filled with various cereal containers. Describe the basic steps for cooking that particular cereal.		

QUANTITY COOKERY: CEREALS AND PASTA

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Apply the proper techniques in cereal cookery	Take part in a cereal lab in which one group prepares an instant cereal, one group a quick cooking cereal, and a third group a regular cereal. Portion cereal samples for each student and rate the cereal on the following characteristics: free from lumps, not gummy or pasty, moist and not dry.		
	Acquire additional skill in cereal preparation	Prepare the following types of food: oatmeal sheet cake which requires cooked oats as an ingredient, grits to accompany a "soul food" meal, a rice casserole, and a rice pudding to be served as a dessert.		
Pasta dishes, which are both economical and filling, are also important menu items.	Identify foods that are considered pasta	Visit a local grocery store and note the variety of pasta available. Write down the varieties and the cost of each. Check your list to determine which is the most expensive; the least expensive. View a display of pasta products. Which ones can you name? Listen as the teacher names the other varieties and explains how they are used. Note: What characteristics do all pastas have?		

QUANTITY COOKERY: CEREALS AND PASTA

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Illustrate the varieties of pasta available	Make a display of pasta "people" and label them or dye pasta and use it to make designs and pictures.		
	Cite the steps for cooking pasta	Study a flip chart showing rules for cooking pasta. Participate in a demonstration in which one cup each of macaroni, noodles, and spaghetti are cooked. After the pastas are drained, remeasure each variety to determine the amount the pasta expands while cooking. Observe a chef in an Italian restaurant preparing pasta to serve to customers or observe a demonstration in class. Note the following: What is added to the water to prevent clumping of the pasta? Why is pasta started in boiling water? How can you tell when various types of pasta are done? What utensil is used to drain pasta? What happens when pasta is cooked in large quantities?		
	Explain how to prevent poor pasta products	Role play the part of an Italian chef. Your classmates will be given questions to ask you about pasta cookery. You are the "expert" who will tell them how to remedy a problem.		

QUANTITY COOKERY: CEREALS AND PASTA

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Sample questions: I always get burned when I try to drain the water off the pasta. How can I prevent this? My spaghetti sticks together after it is cooked? What can I do about this? When I cook pasta, the water always boils over onto the range. Why? I've heard vitamins can be washed away. Should pasta be rinsed off after draining it? My noodles are either overcooked or undercooked. How can I cook them just the right amount?		
	Follow the correct procedures for cooking pasta	Divide the class into teams of two. Select a variety of pasta to prepare for the class to sample. Read the instructions on the package. Butter the pasta to prevent if from sticking together. Sample each type and discuss the differences.		
	Acquire additional skill in pasta cookery	Prepare an Italian luncheon for teachers providing a selection of main course pasta dishes. Prepare a variety of casserole dishes which include pastas. Prepare macaroni to be used in a main dish salad.		

TRADE VOCABULARY

starch
protein
flakes
noodles
lasagna
boiling water
whole grain
shredded
granular
overcooking
enriched
dry
macaroni
spaghetti
pasta
undercooking

QUANTITY COOKERY: SANDWICHES

COMPETENCIES The student will be able to:

- identify the nutrients found in different types of sandwiches.
- identify the types of hot and cold sandwiches sold commercially.
- define the terms related to sandwich preparation.
- list the steps in preparing cold sandwiches in quantity.
- illustrate the correct steps in preparing cold sandwiches in quantity.
- prepare cold sandwiches in quantity using the correct procedures.
- apply the appropriate standards to quantity cold sandwich preparation.
- initiate the proper techniques when preparing cold sandwiches.
- list the steps in preparing high quality hot sandwiches.
- identify the code symbols for sandwiches.
- illustrate the steps in hot sandwich preparation.
- prepare quality hot sandwiches using correct procedures.
- produce high quality hot sandwiches in quantity using the correct procedures.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Sandwiches can supply our bodies with essential nutrients needed for growth and health.	Identify the nutrients found in different types of sandwiches	Classify sandwiches according to the nutrient contributions they provide: minerals, protein, vitamins, energy. (Consider the filling as well as the bread.) See the following sections in Applied Nutrients: Protein, Iron, Vitamins, and Minerals, and The Four Food Groups and Meal Planning: The Protein Group, and The Bread and Cereal Group.		

QUANTITY COOKERY: SANDWICHES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Sandwiches are popular food items because they are nutritious, reasonably priced, and quick.	Identify the types of hot and cold sandwiches sold commercially	Compile the results obtained from an opinion poll of classmates and teachers on favorite cold and hot sandwiches. Categorize the lists of cold sandwiches according to the following headings listed on the blackboard: sliced meat, filling, and salad. Read through a collection of menus, and list the types of cold and hot sandwiches served. Compare the two lists. Why are sandwich lists so nearly the same in most restaurants?		
	Define the terms related to sandwich preparation	View labeled transparencies illustrating the terms used in sandwich making. Listen as the teacher gives necessary information on each. Note: What is the most common sandwich bread? What other varieties of breads are used in sandwiches? How thick should slices be? How can butter be made more spreadable? How can flavor, color, and texture of fillings be changed? Give definitions orally as sandwich terms are presented on flash cards.		

759

758

QUANTITY COOKERY: SANDWICHES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Following only the accepted standards for the preparation and serving of sandwiches ensures a higher quality product.	List the steps in preparing sandwiches in quantity	Match illustrations and corresponding terms used in sandwich preparation. Include the following: club sandwich, spread, chop, bun, slice, filling. Tour a restaurant, soda fountain, or vending company to observe the process involved in preparation of cold sandwiches. View slides or films on sandwich preparation. Discuss the following: What are characteristics of a high quality sandwich? What measure prevents soggy sandwiches? What happens when sandwiches are improperly wrapped? What sanitation rules are related to sandwich preparation? How is an equal amount of filling measured for each sandwich? What tools are needed in sandwich preparation? Why should plastic gloves be worn during sandwich preparation? Arrange pictures illustrating sandwich preparation in the proper order. Watch demonstrations on making basic sandwich fillings. Examples: tuna salad, pimiento cheese, and chicken salad.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Observe a sandwich assembly set up as the teacher goes through the process.		
	Illustrate the correct steps in preparing cold sandwiches in quantity	Watch a demonstration by a caterer of the variety in cutting and garnishing sandwiches. Examples: checkerboard, ribbon, open, pinwheel, and "two toned" sandwiches. Draw a diagram on the chalkboard or on transparency film of an individual work set up for preparing sandwiches. Using the illustration, take turns explaining the step by step procedures for quantity sandwich preparation.		
	Prepare cold sandwiches in quantity using the correct procedures	Prepare a sandwich luncheon for the faculty. Take part in assembly line production of wrapped cold sandwiches for a concession or snack stand. Practice spreading sandwiches using one of the following fillings: peanut butter and jelly, egg salad, pimiento cheese, or cheese. Spread at least three sandwiches each. A student supervisor will check your sandwiches on the amount of filling, on whether the filling is spread to the edges, and on whether the bread is not torn or mashed down.		

QUANTITY COOKERY: SANDWICHES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Apply the appropriate standards to quantity cold sandwich preparation	Prepare sandwiches to be sold at the snack bar or by school vending machine during lunch hour. Fill machine just prior to lunch hour and empty immediately after. Take orders for sandwiches for class picnics and parties, or for parties given by teachers and office personnel.		
	Initiate the proper techniques when preparing cold sandwiches	Volunteer to prepare sandwiches for family and guests at home. Use the procedures learned in class. Show friends and others working on a committee for party refreshments how to spread and assemble sandwiches in order to get a high quality product. This might be for an FHA-FFA party, Y-Teens, or other club organizations.		
	List the steps in preparing high quality hot sandwiches	View a demonstration by the teacher on correct procedures for preparing hot sandwiches. Examples: hamburgers, grilled cheese, hot steak sandwiches, and toasted ham and cheese. Visit a short order food service establishment and observe a demonstration by an employee on preparation of hot sandwiches. Note: Were		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		meat patties formed by the food service worker or purchased frozen? How were other ingredients prepared and stored? What steps were followed in hot sandwich preparation? Were these steps used each time? When you return to class, list the steps in hot sandwich preparation.		
	Identify the code symbols for sandwiches	Study sandwich portion of handout sheet on codes or abbreviations used by food services personnel. Review the sandwich codes through use of flash cards held up by your partner. The code will appear on the front and its meaning will be given on the back. Repeat, holding up the terms. As each term is held up, quickly write its abbreviation.		
	Illustrate the steps in hot sandwich preparation	Summarize steps in preparation of a hamburger and a hot dog. Role play taking orders for hot sandwiches, relaying ticket to the cook, making hot sandwiches, and serving the sandwich.		

QUANTITY COOKERY: SANDWICHES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Prepare quality hot sandwiches using correct procedures	Divide the class into two groups. One group prepares hamburgers using the charbroiler. The other group uses the griddle. Quarter the hamburgers, and serve each student a portion of each type hamburger. Compare flavor and quality of each.		
	Produce high quality hot sandwiches in quantity using the correct procedures	Practice preparing hot sandwiches by having a "sandwich for lunch week." Prepare a different type sandwich each day of the week. The student supervisor will check to see that correct amount of gravy is used, that meat and gravy are placed on the bread correctly, and that the edges of the plate are neat and clean. Set up a short order restaurant for teachers and serve hot sandwiches.		

TRADE VOCABULARY

grilled sandwich
grate
chop
menu
club sandwich
melt
dice
spread
cut
brush
slice
bun

ASSEMBLY LINE PRODUCTION OF SANDWICHES

Workers: 5

Equipment: trays, spreader, scoop, slicing knife, plastic wrap, plastic gloves

Ingredients: bread slices, spread, filling

First Worker: Places bread slices in four rows; slides to next worker.

Second Worker: Spreads each slice of bread with butter, mayonnaise, mustard, or other spread; slides to next worker.

Third Worker: Places a scoop of filling on all bread slices in the second and third rows. Spreads filling with a spatula. Slides to next worker.

Fourth Worker: Closes sandwiches using both hands to cover two sandwiches and cut them. Slides to next worker.

Third Worker: Bags or wraps sandwiches and stores in the refrigerator.

QUANTITY COOKERY: CHEESE

COMPETENCIES The student will be able to:

- identify the nutritional contributions cheese makes to our diet.
- identify the basic types of cheeses.
- give examples of the uses of various cheeses.
- identify storage techniques for cheese.
- identify the proper techniques for cheese cookery.
- illustrate the proper techniques for cheese cookery.
- follow proper techniques for cheese cookery.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Cheese supplies our bodies with essential nutrients needed for growth and health.	Identify the nutritional contributions cheese makes to our diet	Discuss the contributions cheese makes to human nutrition. Does cheese contain all eight essential amino acids? Is it a nutritionally adequate substitute for meat? See the following sections in Applied Nutrition: Essential Nutrients: Calcium, Protein, and The Four Food Groups and Meal Planning: The Milk Group, and Special Nutritional Concerns: Vegetarian Diets.		
Cheese, a dairy product with great versatility, adds appealing flavor to all parts of the menu, from appetizer to dessert.	Identify the basic types of cheeses	View a filmstrip or film on cheeses. Note the following: the differences in natural and process cheese, the differences in ripened and unripened cheese, and the names of cheeses in each category. Take part in a cheese/tasting party. How many of the unlabeled cheeses do you recognize?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Notice the names of the cheeses as the teacher places a label by each dish. Listen as she/he explains how each variety is used.		
	Give examples of the uses of various cheeses	Select a card which names a dish containing cheese. Name aloud a type of cheese which could be used in that dish. Do your classmates agree? If not, what cheese do they suggest? Examples: pizza, stuffed tomato, lasagna, macaroni and cheese, and banana-bread sandwiches.		
	Identify storage techniques for cheese	View a bulletin board which gives steps in proper storage of cheeses. Listen as the teacher explains the following: length of storage time for ripened and unripened cheeses, the need for tight wraps around some cheeses, colder temperatures necessary for unripened cheeses than for ripened, and effects of freezing on the flavor of cheese.		

QUANTITY COOKERY: CHEESE

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Cheese is often used in food service for two reasons: first, there is very little waste involved, and second, cheese is an economical substitute for meat dishes.	Identify the proper techniques for cheese cookery	Observe a demonstration on cheese cookery by a National Dairy Council representative. Note the following: What is the purpose of grating cheese before adding it to other foods. What temperature is used in cheese cookery?		
	Illustrate the proper techniques for cheese cookery	Set up a demonstration to show the effects of high temperature on cheeses. Prepare a toasted cheese sandwich under high heat and medium low heat. Compare the quality of the products.		
	Follow proper techniques for cheese cookery	Prepare and serve a cheese fondue or hot cheese balls as refreshments for a HERO-FHA chapter meeting or an advisory council meeting.		
		Prepare a cheese cake dessert to be served at a regular faculty meal and/or cater cheese cake and coffee refreshments for a principal's meeting or faculty meeting.		
		Prepare some of the following dishes to be served at regularly scheduled luncheons: cheese biscuits, cheese sauce with vegetables, pizza, lasagna, and grilled cheese sandwiches.		

TRADE VOCABULARY

natural cheese

process cheese

cottage cheese

cream cheese

cheddar

parmesan

mozzarella

ricotta

provolone

Roquefort

Swiss cheese

souffle

fondue

QUANTITY COOKERY: SPICING AND FLAVORING

COMPETENCIES The student will be able to:

- identify spices, herbs, and extracts that are used in flavoring food.
- state the cooking techniques for using spices, herbs, and extracts in flavoring foods.
- describe the cooking techniques for using spices, herbs, and extracts in flavoring foods.
- attempt to use spices, herbs, and extracts in preparing foods.
- state the correct care and storage of spices, herbs, and extracts.
- display a desire to follow the correct methods for the care, storage, and use of spices, herbs, and extracts in food preparation.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The flavor of food is greatly enhanced through the proper use of spices, herbs, and seasonings in general.	Identify spices, herbs, and extracts that are used in flavoring food	View pictures on a flip chart to learn the identity of spices, herbs, and extracts. Repeat the name of the seasoning as the teacher points it out on a transparency. Visit a supermarket to identify spices, herbs, and extracts that are available. Name four of the seasonings you have seen. Participate in a tasting lab on spices, herbs, and extracts. Examine bottles, jars, and boxes of these items. Identify the seasonings by the shape of leaves, by fragrance, or by taste.		
In quantity cooking it is essential to be able to use spices properly.	State the cooking techniques for using spices, herbs, and extracts in flavoring foods	Watch a demonstration to learn the cooking techniques for using spices, herbs, and extracts in flavoring foods. Note techniques for using spices, herbs, and extracts. Name		

QUANTITY COOKERY: SPICING AND FLAVORING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		three techniques for using spices, herbs, and extracts in flavoring foods. Why is it important not to overseason food? Why shouldn't all of the spice be added at once? Why would you rub a bowl with a clove of garlic? Why should you add spices to stews or chili the last 30 minutes to 1 hour of cooking? Select a card and explain the cooking technique for using the spice, herb, or extract listed on the card.		
	Describe the cooking techniques for using spices, herbs, and extracts in flavoring foods	Explain why 1/2 teaspoon dried leaf herbs should be substituted for 2 teaspoons of minced fresh herbs. Why should dried herbs be added to the moisture in a recipe? Why should whole pods or leaves be placed in a cheese cloth or metal perforated ball when used for seasoning food? Why should you crush herbs like thyme, bayleaf, oregano, and rosemary with your hand before adding it to food?		
	Attempt to use spices, herbs, and extracts in preparing foods	Prepare an assigned recipe which uses spices, herbs, or extracts. Check the amount and use of an herb or extract with a partner.		

QUANTITY COOKERY: SPICING AND FLAVORING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Careful methods of spice and herb storage prevent deterioration of the aromatic oils and produce more flavorful and appealing dishes.	State the correct care and storage of spices, herbs, and extracts	Watch a demonstration on the care and storage of spices, herbs, and extracts. Why should the aromatic oils in spices be protected from oxidation? How should spices be stored once they are opened? Tour the ingredient room and note the storage of spices, herbs, and extracts.		
	Display a desire to follow the correct methods for the care, storage, and use of spices, herbs, and extracts in food preparation	Follow the correct method for using and storing spices, herbs, and extracts without being reminded. Do not overseason or underseason when preparing food. Keep opened packages of seasonings in covered jars.		

TRADE VOCABULARY

flavoring
seasoning
vinegar
oil
salt
oxidation

Spices

allspice
anise
caper
caraway seed
cardamon
cayenne
celery seed
chili powder
cinnamon
clove
coriander
cumin seed
dill seed
ginger
horseradish
mace
nutmeg
paprika
pepper
pepper corn
poppy seed
sesame seed
mustard
turmeric

Herbs

basil
bay leaf
marjoram
mint
oregano
rosemary
sage
savory
saffron
tarragon
thyme

Extracts

almond
lemon
vanilla
orange

QUANTITY COOKERY: DESSERTS

COMPETENCIES The student will be able to:

- identify the ways desserts can contribute nutrients needed for optimum growth and health.
- identify pastry products.
- identify quality characteristics of pastry.
- cite the steps in preparing quality pastry.
- explain the steps in preparing quality pastry.
- apply the proper techniques for preparing pastry.
- cite the types of pie fillings.
- cite the steps in preparing fillings.
- explain the steps in preparing pie fillings.
- prepare the three basic varieties of pies.
- acquire additional skill in preparing pies in quantity.
- identify the basic types of cakes.
- list the basic steps in cake preparation.
- explain the basic mixing methods for cakes.
- prepare a cake using the appropriate techniques.
- identify the basic mixing methods for frosting.
- explain the procedures for making frosting.
- prepare a frosting using appropriate techniques.
- cite the procedures for mixing frosting.
- cite the steps in frosting cakes.
- prepare cakes and frostings using the proper techniques.
- gain additional skill in cake and frosting preparation.
- list the basic types of cookies.
- cite the steps in cookie preparation.
- describe the steps in cookie preparation.
- apply the correct steps in cookie preparation.
- acquire additional skill in quantity cookie preparation.
- identify types of milk desserts.
- cite the steps in the production of various milk desserts.
- describe the steps in production of various milk desserts.
- produce various milk desserts.

QUANTITY COOKERY: DESSERTS

COMPETENCIES The student will be able to:
name the types of gelatin desserts.
cite the steps in preparation of gelatin desserts.
apply proper procedures for making gelatin desserts.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Desserts can supply our bodies with essential nutrients needed for growth and health.	Identify the ways desserts can contribute nutrients needed for optimum growth and health	Discuss the advantages and disadvantages of the daily inclusion of desserts. See the following sections in Applied Nutrition: Essential Nutrients: Energy, The Four Food Groups and Meal Planning: The Fruit and Vegetable Group, The Bread and Cereal Group, Snacks, and Special Nutritional Concerns: Obesity.		
Dessert items can help a commercial food facility to build a reputation.	Identify pastry products	Observe a display of pastries while on a study tour of a bakery. Ask the names of unfamiliar varieties. Visit a local supermarket and note the types and prices of convenience pastry items offered for sale. Survey local institutions and restaurants to determine if pastries are baked on the premises or purchased elsewhere. View a bulletin board which pictures a variety of pastries. See how many you can name. Take a poll of teachers or classmates to determine the most popular type of pie.		

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the steps in preparing quality pastry	Use the round robin technique to explain steps in pastry preparation with each classmate giving only one step. If a step is given incorrectly or out of order, correct it before going on to the next person.		
	Apply the proper techniques for preparing pastry	Make up pastry mix using the commercial mixer. Measure out enough mix for two crusts. Add water and mix. Roll out the dough in rectangular shape. Cut the dough into 4 inch squares. Place a tablespoon of canned pie filling in each square and fold the dough diagonally to form a tart. Seal the edges and bake. Score the crust for flakiness and tenderness.		
		Prepare a commercial quantity mix for danish pastry, following the directions on the mix. Use assembly line methods for rolling out dough, adding butter, and rerolling. Fill the pastry with a prepared filling. Bake and frost. Serve at a "coffee shop" for teachers.		
		Make up pastry for fried pies. Form the dough into small balls, and roll the balls out on a marked dough board or pastry sheet the size of a tart. Spoon on prepared filling and fold over dough and seal. Cut or prick to ventilate.		

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Fry and drain. Be sure to lable for types if more than one variety of filling is used. Fill orders for the fried pies or sell them in the cafeteria.		
		Make quantity pastry shells to fit tart pans. Make quantity pastry shells to fit regular sized pans. Stack and freeze for future luncheons.		
	Cite the types of pie fillings	View a bulletin board picturing various pies including fruit fillings, cream fillings, and chiffon fillings. See how many you can name. Place name of pies under the following headings on the board: "uncooked soft filling," "cooked soft filling," and "fruit filling."		
	Cite the steps in preparing fillings	View a demonstration of the steps in preparing the following types of pie fillings: fruit, cream, and chiffon. Note the basic ingredients of each type, the method for combining ingredients, the cooking or refrigeration time, the use of a steam jacketed kettle or compartment steamer to prepare cooked fillings, and the use of the French whip for stirring cooked fillings.		

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		View a demonstration on the preparation of meringue from dried egg whites. Note the mixer attachment used and the precautions to take to prevent any oily grease from getting on the egg whites.		
	Explain the steps in preparing pie fillings	Divide class into four groups. One group will explain the steps in preparing an uncooked filling that is poured into a pie shell and baked; another group will explain the steps in preparing a cooked soft filling that is covered with a meringue; the third group will explain the steps in preparing meringue; the fourth group will explain the steps in preparing a fruit pie filling. Each group will then prepare the type of pie. Taste the pies.		
	Prepare the three basic varieties of pies	Work with a partner to prepare a soft filled and uncooked filling pie; a cooked filling pie such as lemon, chocolate, or vanilla cream; a fruit filled pie; and a chiffon pie such as lemon, orange, or pumpkin. Student supervisors will view, sample, and score the pies. Serve the remaining pie slices to teachers. Obtain their comments on the quality of the pies.		

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Fill tart shells made earlier with canned pie fillings of both fruit and pudding types. Serve as desserts for regularly scheduled meals.		
	Acquire additional skill in preparing pies in quantity	Make double crust pies and soft filling pies using assembly line techniques. A student supervisor will check the appearance of each pie for quality control.		
		Take orders for holiday pies at Thanksgiving and Christmas. Provide a choice of three pies.		
	Identify the basic types of cakes	View food models or pictures of a variety of cakes. Watch as the teacher groups them under two categories, butter and sponge, and explains the basic differences in the two types.		
	List the basic steps in cake preparation	Watch a demonstration by the teacher of the creaming method in cake preparation. Note the following: types of ingredients and how they are measured, techniques for mixing batter in the commercial mixer, preparation of the cake pans, and techniques for knowing how much batter is to be poured into the pan. While the cake is baking, watch the steps in preparing a butter cream frosting.		

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Review the following techniques of commercial cake preparation observed in a film or on a study tour: method and preparation used for greasing cake pans and automatic method of filling cake pans.		
		View a film on the preparation of cakes. Notice the steps in each of the following methods: creaming, sponge, or whipped methods. List aloud all the steps you can remember from the film.		
	Explain the basic mixing methods for cakes	Select a sample recipe for a cake. Explain to the class what method is used in mixing that particular cake. Explain what basic type of frosting is recommended for the cake.		
	Prepare a cake using the appropriate techniques	Make a cake using appropriate techniques. Sample the cake and use a check sheet to rate its quality.		
	Identify the basic mixing methods for frosting	Study recipes for different types of frosting. Work with a partner to explain how to prepare one type.		
	Explain the procedures for making frosting	View a demonstration on preparing a creamed frosting and a boiled frosting. Sample each type of frosting on a graham cracker or		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		vanilla wafer. How do they seem to differ? Listen as the teacher explains the difference in the two basic varieties.		
	Prepare a frosting using appropriate techniques	Make small recipes of frosting to practice the techniques for creamed and boiled frostings. Sample and rate the quality. If frosting did not turn out well, try to determine the reason.		
	Cite the procedures for mixing frosting	View slides on frosting cakes. Attempt to name in order each step in frosting a cake.		
	Cite the steps in frosting cakes	Watch a demonstration on how to frost a cake. Note which section of the layer cake is frosted first, next, and what technique is used commercially to prevent cake crumbs from breaking off into the frosting. Why is it important to use a standard portion of frosting on cakes which are to be sold?		
		Describe in your own words the steps in frosting a cake. Explain why each step is necessary.		
	Prepare cakes and frostings using the proper techniques	Prepare a basic sheet cake and butter frosting using a commercial mixer. Frost the cake using proper procedures. Sample the cake and score		

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		both the cake and frosting using a score sheet. Attempt to gain some other views on the quality of your cake. Example: Have one of the homemaking teachers or the cafeteria supervisor score a cake sample.		
		Prepare various types of cakes to be served with meals served in the food service laboratory.		
	Gain additional skill in cake and frosting preparation	Take orders from parents, teachers, and office personnel for special occasion cakes. Bake, decorate, and package the cakes.		
		Take orders and prepare cupcakes and cake squares for school club activities.		
		Give a demonstration of frosting and decorating cakes for a HERO group.		
	List the basic types of cookies	View a cookie display in a bakery. Ask the names of any variety which you do not recognize. Watch a demonstration by the bakers of the preparation of various types of cookies. Look up cookies in the index of a few cookbooks. What basic varieties are listed? Name some of the cookies under each basic type.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Cite the steps in cookie preparation	List aloud the steps in cookie preparation you are able to observe at the bakery or in the school cafeteria.		
	Describe the steps in cookie preparation	Select and read cookie recipes. Explain to the class the basic type of cookie they produce and the major steps in mixing and preparing the dough.		
	Apply the correct steps in cookie preparation	Prepare a drop cookie dough. Portion out one pan of cookie dough using a teaspoon. Use a number 40 dipper to portion dough for another pan of cookies. Evaluate the cookies for the uniform size. Prepare a recipe for a drop type cookie. Weigh out a 6 ounce portion of dough. Form the dough into a 12 inch roll. Cut the roll in half; cut each half in two pieces; cut the four pieces in thirds. You should have twelve sections of cookie dough. Place on pan and bake. Compare the uniformity of these cookies with that of the cookies portioned with the number 40 dipper. Which method is faster? Divide the class into six groups. Each group will prepare one basic type of cookie. Score		

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		samples of all the types. Package and freeze the remaining cookies to be sold later in the teacher's lounge or at a "sweet shop" for teachers or students in other vocational classes.		
	Acquire additional skill in quantity cookie preparation	Make a sugar cookie dough. Divide the dough into three portions. Make one portion into a roll and refrigerate until firm enough to slice, chill the second portion before rolling, and roll the third portion immediately. Which dough is easiest to roll? Which is easiest to shape? Try using the meat slicer to slice the chilled, rolled dough. Which method for shaping sugar cookies would you recommend and why? Use a cookie press to make a large quantity of cookies for a special event such as a PTA meeting or a Christman Open House for the food service department. Supply nutritious cookies on a contract basis for Head Start or early childhood classes.		
	Identify types of milk desserts	Scan magazines for pictures of milk type desserts. Display the pictures for the class and name each dessert.		

805

806

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Cite the steps in the production of various milk desserts	Review the unit on pastries and fillings. Note the information on custards and puddings. List the steps you are able to recall.		
		Review information on portioning to determine the proper methods for serving puddings and milk desserts.		
		View a filmstrip on dispensing and serving ice cream products. What particular references to sanitation are made?		
		Review procedures in the equipment unit for using the soft ice cream machine.		
	Describe the steps in production of various milk desserts	Make a series of drawings which indicate the steps in preparing an ice cream sundae or a banana split.		
		Illustrate the methods for preventing sticking and scorching of cooked milk desserts, such as the use of the double boiler and rinsing cooking pan with cold water before placing milk in the pan.		
	Produce various milk desserts	Operate a "Sweet Shop" for other vocational classes and prepare banana splits and sundaes to order.		

QUANTITY COOKERY: DESSERTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Prepare individually baked custards to serve with meals. Use proper portioning and holding techniques for custards.		
	Name the types of gelatin desserts	Take part in a five minute contest to see how many pictures of gelatin desserts you can find in available magazines. What combinations of gelatins and ingredients do you see represented in the example? Why do you think gelatin desserts are popular?		
	Cite the steps in preparation of gelatin desserts	Review the salad unit. List the steps in the preparation of flavored and unflavored gelatin. What procedures do you recall that deal specifically with dessert gelatins? Example: the time fruits are added to the gelatin, the use of fruit juices in place of water, and the reasons for not using frozen or fresh pineapple.		
	Apply proper procedures for making gelatin desserts	Prepare parfaits and other whipped gelatin desserts. Include them in the dessert display for a cafeteria service meal. Prepare tortoni to be served with an Italian dinner.		

TRADE VOCABULARY

pastry

dough

crust

flaky

fluted

custard

pudding

meringue

batter

butter cake

sponge cake

chiffon cake

sugar crystals

frosting

icing

crumbs

drop cookies

bar cookies

pressed cookies

molded cookies

refrigerator cookies

gelatin

QUANTITY COOKERY: MEATS, POULTRY, AND SEAFOOD

COMPETENCIES The student will be able to:

- identify the nutritional contributions which meats, poultry, and seafood provide in our daily diet.
- identify the major varieties of meat, poultry, and seafood.
- identify the proper methods for care and storage of meats, poultry, and seafood.
- explain techniques for care and storage of meats, poultry, and seafood.
- define dry and moist heat cookery.
- give examples of meats, poultry, and seafood which can be cooked with dry heat and moist heat methods.
- list the steps to follow in dry heat cookery of meats, poultry, and seafood.
- explain the steps in dry heat cookery of meats, poultry, and seafood.
- prepare meats using the proper techniques for dry heat cookery.
- list the steps to follow in moist heat cookery.
- explain the steps in moist heat cookery of meat, poultry, and seafood.
- practice techniques for moist heat cookery of meat, poultry, and seafood.
- prepare meats, poultry, and fish by the moist heat and dry heat methods.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Meat, poultry, and seafood supply our bodies with essential nutrients needed for growth and health.	Identity the nutritional contributions which meats, poultry, and seafood provide in our daily diet	Discuss the importance of the acceptability of meat products in assuring that the nutrients they contain will be utilized in the body. See the following sections in Applied Nutrition: Essential Nutrients: Iron, Protein, the B Vitamins, Fat, and the Four Food Groups and Meal Planning: The Meat Group.		

QUANTITY COOKERY: MEATS, POULTRY, AND SEAFOOD

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The quality of cooked meat is dependent upon three factors: the quality of the purchased meat, storage procedures, and cooking methods.	Identify the major varieties of meat, poultry, and seafood	Observe a bulletin board which depicts a variety of meats. Discuss the actual sources of the meats pictured. Remove the pictures and revise the bulletin board, placing pictures under the following categories: Meat--Beef, Pork, Lamb; Poultry; Seafood. View a filmstrip on the varieties of meats available. Did you recognize any particular cuts of meats? Name them. Visit a local fish market and note the varieties of fresh seafood available. Look at menus from restaurants which specialize in fish dishes. List the types of fish and other seafoods available. Scan menus provided by the teacher. Make a list of all the types of meats offered. Classify each variety under the categories listed previously. Of all the meats listed, which would you order from the menu? Check to see if the majority of the class preferred beef, pork, lamb, poultry, or seafood.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the proper methods for care and storage of meats, poultry, and seafood	Listen to a tape recording of a meat market manager describing the correct methods for care and storage of meats. Note the following: How long can ground meat be stored? Larger cuts of raw meat? Fresh fish? What is the best method for thawing large quantities of meats? Which types of meats can be stored longer: beef, lamb, or pork? Poultry, or Seafood? Should fresh meats be tightly covered when stored in the refrigerator? Why? Should cured meats be frozen? Can unused fresh meat be refrozen? Can unused frozen and thawed meat be refrozen?		
	Explain techniques for care and storage of meats, poultry, and seafood	Choose one of the following rules to illustrate to the class: (1) Seafood must not be thawed at room temperature. Show the class samples of fish you have allowed to thaw in the refrigerator and a sample thawed at room temperature. Note the difference in seepage of fluid. What happens to the fish when most of the fluid is removed? (2) Ground meat should not be stored longer than 24 hours. Show the class a sample of fresh ground meat compared to ground meat that has been in the refrigerator two days.		

QUANTITY COOKERY: MEATS, POULTRY, AND SEAFOOD

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The type and size of a particular cut of meat, poultry, or seafood determines the method chosen to cook that product. The time available for cooking and the degree of doneness desired by the customer also influence the choice of cooking methods.	Define dry and moist heat cookery	Take a study tour to a meat market where the butcher will explain the dry and moist heat methods of cooking meat and will give examples of cuts of meat which are cooked by these basic methods. List techniques such as baking, frying, pan-broiling, braising, broiling, stewing under the categories: dry heat, moist heat.		
	Give examples of meats, poultry, and seafood which can be cooked with dry heat and moist heat methods	Study a chart which shows what cuts of beef, lamb, and pork can be cooked using the dry heat method. Note the type of poultry which can be cooked by dry heat methods. Note the fish varieties which can be baked or broiled. Prepare a bulletin board illustrating the dry and moist heat methods of meat cookery and the cuts and types of meats, poultry, and seafood which can be prepared by each dry or moist heat method.		
	List the steps to follow in dry heat cookery of meats, poultry, and seafood	Study a flip chart which lists the steps in the three major dry heat techniques: roasting, broiling, and pan broiling. Why are these three methods known as dry heat cookery?		

QUANTITY COOKERY: MEATS, POULTRY, AND SEAFOOD

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		View a film or filmstrip on roasting, broiling, and pan broiling. Note the following: Is a lid placed on a roasting pan during the cooking process? Why is the meat placed on a rack in the roasting pan? In broiling, is the direct flame under or over the meat? How often is meat turned during broiling? In broiling, how do you mark the meat with the characteristic diagonal grill marks? How do you determine when roasted and broiled meats are done? How is the loss of natural meat juices prevented? Why is it necessary to pour off accumulated fat when pan broiling?		
	Explain the steps in dry heat cookery of meats, poultry, and seafood	Choose one meat dish which is prepared by dry heat and explain to the class the steps and equipment necessary in its preparation. Examples: roast beef, broiled T-bone steak, roast turkey, broiled hamburger patties, pan broiled ham, and pork roast.		
	Prepare meats using the proper techniques for dry heat cookery	Roast a large cut of meat, a turkey, or a her. Use a meat thermometer to determine the doneness of the meat. Bone if necessary and freeze to serve later with a scheduled meal.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Prepare a fish dish such as halibut using dry heat techniques. Serve with a salad and other vegetables as a "fish day" luncheon for teachers and other regular customers. Prepare both grilled and broiled hamburger patties for the hamburger luncheon menu for regular customers. Poll the customers to see if they prefer broiled patties to those cooked on a griddle. Prepare a meat loaf using the commercial mixer. Be certain to mix dry ingredients first, then liquid, and meat last. Do not overmix. Heat a precooked turkey roll or boneless beef roast. Slice and serve as part of the regular luncheon menu. Compare the time involved in preparation of precooked meats and those cooked in the lab.		
	List the steps to follow in moist heat cookery	Study a flip chart which lists the steps in the three major moist heat techniques: braising, frying, and stewing. View a filmstrip or film on moist heat methods. Note the following: What is the difference in		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		the amount of liquid used in braising and stewing? In frying, what liquid is used in place of water? What is the coating or covering for fried meats called? What is the purpose of breading? What is the reason for browning the meat in the braising process? Observe the techniques used by a fry cook while on a study tour of a short order restaurant. Note the following: Are prebreaded meats used? What temperature is used for chicken? For fish portions? For shrimp? What utensil is used to turn the meat? How does the cook determine if the meat is done?		
	Explain the steps in moist heat cookery of meat, poultry, and seafood	Choose one meat dish which is prepared by moist heat and explain to the class the steps and equipment necessary in its preparation. Examples: pot roast, stew, barbecued brisket or chicken, smothered steak or liver, stewed chicken and dumplings and fried chicken.		
Using low heat will ensure flavorful and tender meat, poultry, and seafood.	Practice techniques for moist heat cookery of meat, poultry, and seafood	Compare the time and results of pan-fried and deep fried chicken. Prepare all the parts of one fresh cut up chicken in the following manner: dip in cold milk, add paprika to flour, flour each chicken part with this		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		mixture, let rest on a rack for ten to fifteen minutes without stacking the pieces, fry half the pieces in a heavy skillet using conventional cooking oil and medium temperature, fry the remaining pieces in a deep fryer using a commercial cooking oil and a 360° temperature, drain when golden brown, cool and check flavor and greasiness of both products. Conduct another, similar experiment with fried chicken. This time compare the chicken which was coated in the lab with a frozen prebreaded variety. Prepare a stew in which the meat is browned before cooking in the liquid. Use the same ingredients for preparing another pot of stew but do not brown the meat before cooking in the liquid. Sample both types of stew. Compare the flavor and appearance of the two stews. Prepare bacon on the griddle for use in bacon and tomato sandwiches. Experiment in using a bacon press to keep the strips flat and in turning several pieces at one time.		

QUANTITY COOKERY: MEATS, POULTRY, AND SEAFOOD

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Prepare meats, poultry, and fish by the moist heat and dry heat methods	Serve a fish luncheon to teachers. Give it a theme like, "The Fish Hook," and decorate the dining area appropriately. Cater a meal for an in-service day luncheon for teachers. Prepare an economical variety of meat. Prepare carry out orders for fried chicken and shrimp for school personnel.		

TRADE VOCABULARY

Techniques

bake

braise

broil

cube

deep fry

dry heat cookery

fricassee

grind

moist heat cookery

pan broil

pan fry

pound

roast

rotisserie

score

simmer

steam

stew

thaw

truss

Seafood

clams

crab

fish
- drawn
- dressed
- filleted
- steak

lobster

oyster

salmon

shrimp

tuna

Meats

beef

lamb

pork

variety meats

veal

Poultry

Cornish hen

chicken
- broiler
- fryer

duck

goose

guinea hen

squab

turkey

giblet

Condition or Quality

boned

bone in

boneless

grade

inspection stamp

lean

marbled

protein

scaled

tender

tough

QUANTITY COOKERY: SALADS AND SALAD DRESSINGS

COMPETENCIES The student will be able to:

- identify the nutritional contributions which salads and salad dressings make to the daily diet.
- define terms related to the preparation of a salad.
- list the steps for the preparation of a salad.
- develop a method for evaluating the qualify of salads.
- explain in own words how to prepare a salad.
- apply the correct procedures for making salads.
- acquire skill in salad preparation.
- create new ways of garnishing salads.
- identify the types of salad dressing and their uses.
- explain correct procedures in salad dressing preparation.
- cite the correct steps in salad dressing preparation.
- produce quantity salad dressing using correct procedures.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Salads and salad dressings supply our bodies with essential nutrients needed for growth and health.	Identify the nutritional contributions which salads and salad dressings make to the daily diet	Discuss the importance to human nutrition of salad in fiber, nutrient, and energy contributions. See the following sections in Applied Nutrition: Essential Nutrients: Vitamin A, Vitamin C, Fat, Water, and The Four Food Groups and Meal Planning: The Fruit and Vegetable Group.		
Salads contribute variety, crispness, and flavor to a meal.	Define terms related to the preparation of a salad	View a film or filmstrip on salad preparation. Listen for terms related to salad preparation and use. Discuss the unfamiliar terms.		

QUANTITY COOKERY: SALADS AND SALAD DRESSINGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Note pictures of food models of salads. Determine categories they are in. Examples: appetizer, main course, and dessert. Observe a display of different salad greens and salad vegetables in a market display. Listen as the instructor identifies each product by name and indicates its use. Note terms for types of blemishes and vegetable portions which would have to be discarded. Examples: bruised, limp, covered with rust, and discolored. Observe a demonstration of the preparation of the basic salad types. Listen as the teacher discusses the principles of each salad type with regard to quality of ingredients, eye appeal, color contrast, simplicity, neatness, and preparation techniques such as chopping, dicing, slicing. Following the demonstration, list each salad type and suitable ingredients. Take an oral quiz to identify salad products by name. Choose two teams. Each will attempt to identify the product as salad greens, fruits, or vegetables and its use. Each team will be given one point for correct answers.		

QUANTITY COOKERY: SALADS AND SALAD DRESSINGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Salads will be appealing if they are made from crisp, fresh, superior fruits and vegetables.	List the steps for the preparation of a salad	One point will be subtracted for cheating or answering out of turn. View magazine pictures to gain ideas for combining salad ingredients and for creative uses of garnishes in preparing salads. Observe a demonstration on proper cleaning, washing, and preparation of salad ingredients. Note the condition of greens that have been prepared and crisped prior to the demonstration. Discuss the following questions: How is ripeness of fruits and vegetables judged? How is the discoloration of fruits prevented? Which fruits discolor easily? How should salads be stored to retain their freshness? What does over mixing do to a salad? Arrange diagrams or pictures of steps in salad preparation in the order in which they should be done. Observe a teacher demonstration of the preparation of a gelatin salad. Note the necessity of soaking plain gelatin in cold water, dissolving flavored gelatin in boiling water, the length of time for congealing, the proper time		

835

838

QUANTITY COOKERY: SALADS AND SALAD DRESSINGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		to add vegetables and fruits, and the method for unmolding.		
	Develop a method for evaluating the quality of salads	Design a score card which can be used in judging salads produced in quantity. The supervisor of each lab where salads are served will use the score card as a checklist to evaluate the salads produced that day. Students will evaluate the salads also.		
To produce salads and salad dressings in quantity, one must learn the proper techniques.	Explain in own words how to prepare a salad	Prepare a poster which illustrates the steps in salad preparation. Duplicate the demonstration on washing and storing salad greens. As the other students watch, they will write down any mistakes or points left out. Take turns washing and storing greens properly. Review salad terms and the steps in salad preparation. Each student will select one card from a group of cards naming popular types of salad and produce that salad.		
	Apply the correct procedures for making salads	Practice mass production in cleaning and storing vegetable greens to be used later in making quantity salads.		

QUANTITY COOKERY: SALADS AND SALAD DRESSINGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Select a fruit or vegetable salad which is unfamiliar to you that appears on a restaurant menu. Prepare this salad to be served at a tasting party.		
		Divide the class into groups. Each group will be given one category of salad: appetizer, main course, accompaniment, or dessert to prepare for a salad luncheon to be served to the class.		
	Acquire skill in salad preparation	Prepare a salad luncheon for teachers; use a variety of salads and serve salads individually in the cafeteria. Be sure that each serving is neat and uniform in size and that salads placed next to each other harmonize in color.		
		Take orders from teachers and school office personnel for individual salad plates to be served on specific days of the week.		
	Create new ways of garnishing salads	Develop through lab practice some techniques for garnishing salads using ideas which you have seen. Demonstrate these techniques to the entire class.		

QUANTITY COOKERY: SALADS AND SALAD DRESSINGS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the types of salad dressing and their uses	Sample each type of salad dressing in a labeled display. Rank each salad dressing according to your personal preference. Compare your list with those of fellow classmates. Note the category under which each dressing could be classified. For example: mayonnaise, cooked, or French. Listen as the teacher gives examples of types of salads with which each dressing can be used. Look through several menus from food establishments. Write down the number of times a particular salad dressing is listed on a menu. Total the tallies to determine which salad dressings are the most popular in your area of the country. Match salad dressings with their names by viewing a display of numbered bowls of salad dressing and locating the name of the dressing from a list on the board.		
	Explain correct procedures in salad dressing preparation	View a film or demonstration by the teacher of preparation of the three basic types of salad dressings. Note the importance of adding certain ingredients slowly.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Cite the correct steps in salad dressing preparation	Divide class into four groups. Each group will explain one of the basic recipes written on a flip chart for mayonnaise, mayonnaise with a cooked base, French, and cooked salad dressings.		
	Produce quantity salad dressing using correct procedures	Prepare quantity recipes of mayonnaise to use later with sandwiches and hamburgers and French and thousand island dressings for later use with salads.		

TRADE VOCABULARY

crisp
dessert
appetizer
limp state
color
flavor
chilled
olive oil

accompaniment
bruise
discolor
main course
seasoning
vinegar
texture
rust

QUANTITY COOKERY: SAUCES, GRAVIES, AND SOUPS

COMPETENCIES The student will be able to:

- identify the nutrient contributions in the ingredients used to make sauces, gravies, and soups.
- identify the basic varieties of sauces.
- illustrate the types of sauces for each basic food type.
- cite the steps in preparing basic sauces.
- summarize the steps in making basic sauces.
- demonstrate the preparation of various types of sauces.
- define the term "gravy."
- describe the steps in gravy preparation.
- demonstrate the correct procedures in making gravy.
- name the basic ingredients of soups.
- identify the major types of soups.
- describe the varieties of soups.
- list the steps in preparing soups.
- prepare soup using proper techniques.
- describe the steps in preparing soups.
- acquire additional skill in soup preparation.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Sauces, gravies, and soups can supply our bodies with essential nutrients needed for growth and health.	Identify the nutrient contributions in the ingredients used to make sauces, gravies, and soups	Discuss the nutrients provided in sauces, gravies, and soups. Using recipes for various sauces, gravies, and soups, list the nutrients provided by the ingredients. See the following sections in Applied Nutrition: Essential Nutrients: Fat, Protein, and The Four Food Groups and Meal Planning: The Milk Group, The Protein Group, and The Fruit and Vegetable Group.		

846

847

Key Concept	Competency	Suggested Activities	Resources	Evaluation
When carefully prepared, gravy or sauce can significantly improve the flavor of meats, vegetables, or desserts.	Identify the basic varieties of sauces	Look through cookbooks and magazines to find pictures and names of sauces. Take part in a buzz session to name the various sauces class members have eaten. Make a list of the sauces named.		
	Illustrate the types of sauces for each basic food type	Note the headings written on the board: "spicy sauces for meats," "sweet sauces for desserts," "cream sauces for vegetables." Study the list of sauces named by the class and take turns writing the name of a particular sauce under the correct heading. Did your classmates agree with your choice? If not, why?		
	Cite the steps in preparing basic sauces	Observe a demonstration by a utility company representative or a teacher on the preparation of basic sauces. Note the following: Is the flour always cooked before adding liquid? Should the liquid be cold or hot when added to the flour?		
	Summarize the steps in making basic sauces	Choose one of the following types of sauces and restate the steps in its preparation in your own words: sauces to accompany meat or vegetables and dessert sauces. Prepare the sauce.		

848

849

QUANTITY COOKERY: SAUCES, GRAVIES, AND SOUPS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Demonstrate the preparation of various types of sauces	Prepare a tasting lab on dessert sauces. Sample the following varieties of sauces: chocolate, fruit, marshmallow, and caramel. Prepare a fondue meal using various types of sauces to be served with bread cubes, fruits, and meat cubes or slices. Practice steps in making a white sauce. Add ingredients to the basic sauce to produce cheese sauce, egg sauce, mushroom sauce, and others. Prepare tomato sauce to be serve over spaghetti. Prepare a buffet meal for a service group or faculty members. Serve baked ham with raisin sauce. Prepare a variety of vegetables serving one portion with sauce and another portion without. Sample both types. Does the sauce improve the flavor of the vegetable?		
	Define the term "gravy	Observe a demonstration on the steps in preparing gravy. Note that the natural juices of		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		the meats are cooked down before the addition of a thickening agent. Brainstorm to name the types of foods with which gravies are served and to determine the types of liquids used in making gravies.		
	Describe the steps in gravy preparation	State in your own words the method for preparing gravy to accompany turkey and dressing, biscuits and sausage, beef roast, and ham.		
	Demonstrate the correct procedures in making gravy	Prepare one of the following: gravy to serve with a fried chicken dinner or chicken fried steak and gravy.		
The reputation of a particular restaurant is often due to the popularity of its speciality soup.	Name the basic ingredients of soups	Observe a demonstration on the methods for obtaining stock for soups using one pot for bones, one for meat, and one for vegetables. Note the following: the amount of cooking time necessary, whether salt is added, why the stocks must be cooled quickly, and when to remove the fat that rises to the top. Taste while blindfolded the varieties of stock produced and attempt to guess which ingredient was used to produce each variety.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify the major types of soups	Take part in a tasting lab to identify the basic types of soups and when they may be served at a meal. First observe the following examples of soups and appropriate accompaniments as they are served by the teacher and assisting students: bouillon with bread sticks, cream of tomato soup with grilled cheese sandwiches, and meat and vegetable soup served with cornmeal muffins. Discuss the following: What is the purpose of serving a clear stock or light soup? Would a cream soup such as the tomato soup served alone actually satisfy a person's appetite? Why could the meat and vegetable soup be considered a meal in itself or a main dish? When are cold soups served? Look through magazines for pictures of the three types of soups. Make a bulletin board display to show the three types of soup. Give each student a card with one of the following words written on it in large letters: appetizer, accompaniment, or main course. Hold up your card when the teacher shows a picture of a soup that could be served for that purpose.		

QUANTITY COOKERY: SAUCES, GRAVIES, AND SOUPS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Distribute a card to each student with one of the following words printed in large letters: stock or cream. Try to name the basic types of soup by holding up your card when the teacher holds up a picture of that variety of soup.		
	Describe the varieties of soups	Use food models as illustrations to describe soups of each basic type to classmates.		
		Study a flip chart of the steps in preparing soups as the teacher reads and explains each step.		
	List the steps in preparing soups	Watch as the teacher demonstrates the steps in preparing a stock soup, a cream soup, and a chowder. List the steps in preparing each.		
		Read the instructions on dehydrated and canned soups. Are the steps in preparing these similar to those in preparing the same soup from scratch?		
	Prepare soup using proper techniques	Explain each step in preparing the basic types of soup, describing the equipment needed for each step.		

QUANTITY COOKERY: SAUCES, GRAVIES, AND SOUPS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe the steps in preparing soups	Divide into three groups. Each group prepare one basic type of soup. Serve samples of the soups to class members. Take a poll to determine which was the most popular variety.		
	Acquire additional skill in soup preparation	Divide class into four groups to prepare frozen, dehydrated, and canned varieties of the same soup as well as making the soup from a standard recipe. Compare the soups for taste and quality. Plan, prepare, and serve a luncheon with soup as a main course or a dinner with soup as an appetizer.		

TRADE VOCABULARY

thickening agent
puree
chowder
stock
gravy
hollandaise
tartar
bouillon

consomme
broth
fondue
roux
bisque
crouton
soup
sauce

QUANTITY COOKERY: VEGETABLES AND FRUITS

COMPETENCIES The student will be able to:

identify the nutritional contribution of fruits and vegetables in the daily diet.
identify the most common vegetables and fruits.
name the various forms in which fruits and vegetables are available.
interpret the uses of various forms of vegetables and fruits.
cite the correct method for cleaning vegetables and fruits.
describe the proper methods for cleaning vegetables and fruits.
demonstrate the correct methods for cleaning vegetables and fruits.
list ways to reduce or prevent waste in preparing vegetables and fruits.
give examples of methods used to reduce or prevent waste in preparing vegetables and fruits.
demonstrate methods of reducing or preventing waste in preparing vegetables and fruits.
name the various methods used to cook vegetables and fruits properly.
explain the methods used in vegetable and fruit cookery.
identify ways with which vegetables and fruits may be "held" after preparation.
illustrate ways with which vegetables and fruits may be "held" after preparation.
apply correct procedures for cooking vegetables and fruits.
gain increased skill in vegetable and fruit preparation.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Vegetables and fruits supply our bodies with essential nutrients needed for growth and health.	Identify the nutritional contribution of fruits and vegetables to the daily diet	Discuss methods used to promote nutrient retention in the cooking process. Discuss how nutrient losses which may occur during holding can be prevented. See the following sections in Applied Nutrition: Essential Nutrients: Vitamin A, Vitamin C, Fiber, Water, and The Four Food Groups and Meal Planning: The Fruit and Vegetable Group.		

861

862

QUANTITY COOKERY: VEGETABLES AND FRUITS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Quality production of vegetable and fruit dishes depends upon the selection of the proper variety to be used in particular recipes.	Identify the most common vegetables and fruits	List aloud as many vegetables as you can as the teacher writes these on the board under these headings: "root vegetable," "leaf vegetables," "fruit type," and "seed vegetables." Make another list naming fruits. View a filmstrip or transparencies on types of fruits and vegetables. List fruits and vegetables which were not familiar to you. Use produce magazines and cookbooks to find names and pictures of other fruits unfamiliar to you. Play fruit bingo or work a fruit or vegetable word search game or a crossword puzzle to familiarize yourself with the names of fruits and vegetables.		
	Name the various forms in which fruits and vegetables are available	Visit a local grocery store and note the variety of forms in which fruits and vegetables are available, including fresh, frozen, canned, dehydrated, and freeze dried. Divide the class into three groups and participate in a demonstration on the preparation of a fruit or vegetable dish using different forms		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		of the vegetables or fruit such as fresh, frozen, and canned. Write down the amount of time involved in preparation of the recipe using each form of vegetable or fruit. Compare the time required for each.		
	Interpret the uses of various forms of vegetables and fruits	Discuss the value of using fresh, frozen, canned, dehydrated or freeze dried vegetables and fruits in food preparation. Suggest the appropriate uses for each form of fruit or vegetable.		
Color, nutritive value, attractiveness, and flavor of fresh vegetable products are affected by the procedures used in preparation.	Cite the correct method for cleaning vegetables and fruits	Choose one recipe from a selected group of recipes available from the teacher. Read the recipe to the class. Explain what form of fruit or vegetable is needed to prepare the recipe. Determine if another form could be substituted. If so, what changes would need to be made? Prepare the recipe. Watch as the vegetable and salad workers in the school cafeteria clean fruit and vegetables. Observe correct ways to clean vegetables by viewing transparencies and studying handout sheets.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Name aloud methods for cleaning vegetables. Examples: peeling, paring, scrubbing, draining, and boiling.		
	Describe the proper methods for cleaning vegetables and fruits	Draw a slip of paper naming a vegetable or fruit. Explain to the class the procedure to follow in cleaning the vegetable or fruit. Indicate what equipment would be needed.		
	Demonstrate the correct methods for cleaning vegetables and fruits	Clean a variety of green leafy vegetables such as iceberg lettuce, curly endive, turnip greens, and romaine remembering to lift the leaves out of the water before draining the sink. Remove discolored spots and rust.		
		Clean broccoli and cauliflower using a salt-water soak. Have your partner check the vegetable for insects or discolored spots.		
		Practice cleaning fresh berries using a strainer or colander. Check the fruits for any spots indicating spoilage.		
		Practice cleaning and removing stones from dried peas and beans.		

QUANTITY COOKERY: VEGETABLES AND FRUITS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Practice cleaning root vegetables such as carrots, beets, and potatoes.		
	List ways to reduce or prevent waste in preparing vegetables and fruits	Observe a demonstration by a food service employee on ways to reduce or prevent waste in the preparation of vegetables and fruits. Watch a demonstration on the methods of peeling oranges and grapefruit (peeling around the fruit in circular motion and peeling vertically). Observe how to segment citrus fruit without membranes. Observe a demonstration of the discoloration of bananas, apples, and pears after peeling and methods for controlling this darkening of the fruit. Study a flip chart which indicates ways to reduce or prevent waste in fruit and vegetable preparation. Examples: avoiding excessive peeling saves time and yield, diagonal slicing speeds cooking time, uniform pieces or slices of vegetables are necessary to prevent overcooking of smaller pieces, following directions accurately for amounts of liquid to be added to potato flakes or other dehydrated		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		vegetables prevents a worthless product, and lowering heat after bringing vegetables to full boil prevents their cooking to pieces.		
		Check storage charts on fresh fruits and vegetables to determine how long they can be stored before use, and check the temperature at which they must be stored.		
	Give examples of methods used to reduce or prevent waste in preparing vegetables and fruits	Select one of the methods of preventing waste in vegetable preparation. Illustrate the method in poster form for display in the food service lab.		
	Demonstrate methods of reducing or preventing waste in preparing vegetables and fruits	Prepare instant potatoes. Have the teacher double check the liquid measurement. Compare the nutritional value and cost of instant potatoes with "real" potatoes.		
		Weigh two 1 pound stacks of potatoes. Peel 1 pound of potatoes with a regular kitchen knife. Peel the other pound using the vegetable peeler. Weigh each stack of potatoes and compare the results. Which method of peeling results in less waste?		

QUANTITY COOKERY: VEGETABLES AND FRUITS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Practice separating fresh vegetables and fruits that are misshapen or have spots that could be cut away from those vegetables and fruits that could be served as they are. Find a use for the products that could be judged seconds, and for by products such as peelings and juices.		
More nourishing and appealing vegetables are often the result of continuous rather than quantity production.	Name the various methods used to cook vegetables and fruits properly	Brainstorm to name as many methods of vegetable cookery as you can. Review cooking terms related to vegetable cookery by viewing transparencies which illustrate each. Study handout sheet on vegetable cookery which stresses the following: using a small amount of water, preparing as close to serving time as possible, preparing in as small quantities as possible, not using baking soda and similar products, and soaking for dried peas and beans for the correct amount of time.		
	Explain the methods used in vegetable and fruit cookery	Choose one basic method of vegetable cookery: pot on stove, pan in oven, steam jacketed kettle, compartment steamer, or deep fryer. Select the name of a vegetable from a list		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		prepared by the teacher. Use cookbooks available from the teacher to find a recipe for preparing the vegetable using the basic method chosen. Explain the procedure to the class. Prepare the recipe. View a demonstration on cooking dried fruit. Note: What techniques are used for washing the fruit? Why is soaking the fruit necessary? When is sugar added to dried fruits? Watch as the teacher demonstrates methods for holding hot vegetables until serving time. Note the following: How long can vegetables be held in the steam table? Why is a fresh vegetable sometimes cooked in batches with cooking time overlapping? What are the two techniques for holding vegetables that involve undercooking? Take "Vegetable-Fruit Quiz." As the teacher indicates a vegetable or fruit dish, list aloud the steps one would use in preparing that dish. Listen as the teacher gives additional information on the vegetable or fruit preparation if the preparation has been		

875

876

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		described incorrectly by the student. Example: buttered frozen cauliflower, and fresh green beans.		
The quantity of the food item and the availability of equipment influence the choice of methods for vegetable and fruit cookery.	Identify ways with which vegetables and fruits may be "held" after preparation	Study a handout on ways to "hold" vegetables and fruits before serving. Review the procedure for using the steam table and food warmer. Name fruits which should be chilled.		
	Illustrate ways with which vegetables and fruits may be "held" after preparation	Select at least one fruit and one vegetable from sample menus and indicate the method for "holding" the dish until serving time. Explain the equipment necessary for this procedure. Do your classmates agree with your method? If not, why?		
Cooking time and temperature affect the quality of fruit and vegetable dishes.	Apply correct procedures for cooking vegetables and fruits	Prepare a vegetable plate luncheon. Secure recipes which will provide a variety of cooking methods for vegetables from the root, seed, leafy, and flower groups. Take orders and prepare fruit plates for faculty. Garnish attractively.		

877

878

QUANTITY COOKERY: VEGETABLES AND FRUITS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Gain increased skill in vegetable and fruit preparation	Prepare vegetables and fruits using a variety of methods. Serve cafeteria style.		

TRADE VOCABULARY

frozen
dehydrated
vitamin
nutritive value
canned
freeze dried
texture
flavor
carbohydrates
gelatin
citrus
half quarter
boil

panning
creaming
appetizing
pulp
peeling
rind
enzymes
steam
bake
pressure cooking
mineral
pectin

QUANTITY COOKERY: GARNISHES AND APPETIZERS

COMPETENCIES The student will be able to:

- define the term "garnish" as used in food service.
- relate why food product attractiveness and appetite stimulation is important to nutrient consumption.
- identify types of garnishes commonly used in food service.
- give examples of garnishes commonly used on particular dishes.
- identify techniques in garnishing foods.
- describe techniques used in garnishing foods.
- experiment in using the proper techniques for garnishing foods.
- gain speed in garnishing foods.
- identify types of appetizers.
- state techniques for efficient production of appetizers.
- describe techniques for efficient production of appetizers.
- prepare appetizers using correct techniques.
- gain skill in quantity appetizer production.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
An attractive garnishing of a dish often persuades the customer to purchase a particular food item.	Define the term "garnish" as used in food service	Interview the school cafeteria manager to learn whether the foods served in the cafeteria are garnished. Does the manager feel garnishes are worth the added expense? If so, why? If not, why? View a bulletin board display of a variety of ungarnished dishes. Add cut outs of certain decorative pieces of foods to the pictures as you are instructed to do so. Discuss the difference in the appearance of the foods.		

QUANTITY COOKERY: GARNISHES AND APPETIZERS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Listen as the teacher defines the term "garnish." Note the following: What is the main purpose of garnishes? Are there additional purposes? If so, what? What basic techniques should be followed in choosing the garnish and in decorating the food with a garnish? Is it necessary to garnish all foods? If not, on which foods would garnishes be unnecessary?		
Garnishes and appetizers can supply our bodies with essential nutrients needed for growth and health.	Relate why food product attractiveness and appetite stimulation is important to nutrient consumption	Garnishes should always be edible. In this way, they will contribute additional nutrients to the dish. Create nutritious garnishes and appetizers, e.g., carrot curls, and pineapple roses.		
Spending small amounts on food to be used as garnishes often results in increased sales.	Identify types of garnishes commonly used in food service	Study charts in food service manuals on types of garnishes that are used and the foods on which specific ones might be used. View pictures of garnished foods and identify aloud the type of garnish used. View a labeled display of packaged food items that are used as garnishes. Check the back		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		of the cardboard label for the price. Group the items according to their cost. Take a study tour to a cafeteria or a catering service. Brainstorm upon your return to list garnishes used by that facility.		
	Give examples of garnishes commonly used on particular dishes	Select two or three garnishes from a list. Find a picture of a food with which each garnish could be used. Show your examples to classmates. Do they agree on your selections? If not, why?		
	Identify techniques in garnishing foods	Watch a demonstration by a commercial food caterer on the use of garnishes. Note the following: the emphasis on cleanliness when decorating foods, refrigeration of some foods right up until time for decorating and immediate refrigeration afterwards, and the need for speed when garnishing foods. View a display of equipment and a demonstration of techniques to use in garnishing foods. Examples: technique for cutting parsley, slicing eggs, arranging sections of olives, and preparing radish roses.		

QUANTITY COOKERY: GARNISHES AND APPETIZERS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe techniques used in garnishing foods	Choose one garnishing technique to describe and demonstrate to the class. Identity the equipment needed, the method for using it, and the manner in which the particular garnish would be placed on the food.		
	Experiment in using the proper techniques for garnishing foods	Choose from a list one garnish to use on a particular dish prepared in lab. Examples: asparagus: twisted cucumber slices, radish roses, and other varieties of sliced radishes and olives. Practice garnishing meats which will be served in the following ways: sliced and on the plate banquet style, buffet style, and short order. Garnish in an attractive manner soups which have been prepared in lab. Compare garnished and ungarnished bowls of soup. Practice toasting nuts to desired doneness to be used as a garnish.		
	Gain speed in garnishing foods	Garnish appetizers which are made to order for a club or social gathering.		

888

889

QUANTITY COOKERY: GARNISHES AND APPETIZERS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
If pleasing and attractive combinations of food are used to make appetizers, the appetite can be successfully stimulated.	Identify types of appetizers	Examine and taste appetizers that have been prepared, boxed, and frozen commercially. List aloud the variety of ingredients used: canape bases, vegetables, fruits, and cheeses. View pictures of a variety of appetizers that have been grouped and labeled according to type: hors d'oeuvres, or canapes. Listen as the instructor explains the purposes of appetizers, when and how they are served, and the basic types of appetizers.		
	State techniques for efficient production of appetizers	View samples or pictures of special equipment used as parisiene spoons, special knives, and sets of cutters used in preparing and decorating appetizers. Take part in a tasting party prepared by a home service advisor. Class members will attempt to identify the types of appetizers as it is prepared. Note methods for making spreads, garnishings, and arranging the plates attractively. List aloud the methods to follow in preparing appetizers.		

QUANTITY COOKERY: GARNISHES AND APPETIZERS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe techniques for efficient production of appetizers	Select one recipe from a number provided by the teacher. Read the recipe to the class and explain what ingredients and equipment are needed. Describe the methods to be used.		
	Prepare appetizers using correct techniques	Prepare appetizers for a department open house. Divide the class into teams of two. Each team will be given a recipe for hors d'oeuvres and a recipe for canapes. Two students will be assigned to refill trays and beverage containers each hour of the day as teachers and/or parents attend the open house. If the open house lasts for several hours, choose hors d'oeuvres and canapes that refrigerate well and will not become limp or soggy.		
	Gain skill in quantity appetizer production	Take orders from teachers and office personnel to provide appetizers for club or organization meetings. Arrange to provide appetizers for a PTA meeting at which slides and information are given on the food service program.		

TRADE VOCABULARY

- curls
- sprigs
- wedges
- toasted whole
- toasted halved
- sprinkle
- sliced
- roses
- parsley
- pickles
- olives
- nut meats
- hors d'oeuvres
- canapes
- parisiene spoons

QUANTITY COOKERY: BEVERAGES

COMPETENCIES The student will be able to:

- define terms related to the preparation of beverages.
- list quality standards for beverages.
- list the steps for preparation of a beverage.
- identify time saving methods for beverage preparation.
- explain in your own words how to prepare a quantity beverage.
- apply the correct procedures for making quantity beverage.
- improve skills in preparing quantity beverages.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The quality of a meal is affected by the type of beverage served.	Define terms related to the preparation of beverages	Watch a filmstrip on commercial preparation of coffee and tea. Listen for terms unfamiliar to you. Ask the teacher to explain the new words. Brainstorm to answer the question, "What are beverages?" List on the board the examples mentioned. Take a vote of the entire class on what each feels is the most popular beverage in the United States. Volunteer to check food service books to determine which is more popular. Use a card sort to determine to which beverage each term is related. Example: A pegboard with cards labeled "coffee," "tea," and "cocoa" on cup hooks. Sort cards labeled "beans," "aroma," "instant," "decaffeinated," "grind,"		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		"drip," "black," "green," "blend," "iced," "brew," "steep," "dutch chocolate," "milk," and "boil." If a term is to be used more than once there will be more than one card.		
If roasted bean or ground coffee are properly stored, a more delicious beverage can be prepared.	List quality standards for beverages	Read a flip chart of instructions for making quantity coffee, tea, cocoa, and fruit drinks. List on the board any terms which are unfamiliar. Listen to a taped interview of teachers as they indicate the qualities they look for in a good cup of coffee. Check class cookbooks on characteristics of good coffee. Make a combined list on the board. Use this as a checklist for coffee produced in the lab. Make separate lists for tea and cocoa using the above methods. Observe a step by step demonstration of coffee preparation in the coffee maker located in the lab and of tea making using the urn located in the lab. Note the following: How is bulk tea used? What type container is preferred for making tea? Is the hot concentrate poured into cold water, or is cold water poured into		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		the hot concentrate? Should tea be stored in the refrigerator before serving?		
		Observe a demonstration of cocoa and hot chocolate preparation. How hot should the milk be when added to the chocolate mixture? Why is it important to stir the mixture?		
Over extraction or prolonged heating of coffee and tea cause a bitter inferior product.	List the steps for preparation of a beverage	Place cards listing the steps for making coffee, tea, or cocoa in the correct order. Have your partner check your work against his/her list.		
	Identify time saving methods for beverage preparation	Watch a demonstration by the teacher or commercial food salesman on the use of prepackaged coffee for coffee makers, instant tea, instant cocoa, and chocolate syrup. Note a display of the prices per cup of make it yourself coffee, tea, cocoa, and punch compared to prices per cup of each instant or pre-mixed variety. Taste samples of each.		
	Explain in your own words how to prepare a quantity beverage	Display for the class the equipment needed for preparing one of the following: tea, coffee, or cocoa. Give a brief explanation of the steps without actually making the beverage.		

QUANTITY COOKERY: BEVERAGES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Divide into two groups. Pantomime using the coffee maker as the group scores and watches. Use situations like the following: method for filling non-automatic coffee maker with hot water, running out of coffee, coffee maker running over, and forgetting to put a filter in.		
The possibility of unappetizing products can be decreased by providing measures for immediate service and covering containers.	Apply the correct procedures for making quantity beverages	Make coffee for the class. Taste and score the quality.		
		Divide the class into three groups. Each group will make a serving of one variety of tea (instant, bulk, and tea bags) for everyone in the class to taste. Sample each type and score it on taste and time necessary for preparation.		
		Prepare a quantity mix for cocoa and a quantity sprup for hot chocolate. Which has better flavor? Which was easier to prepare?		
	Improve skills in preparing quantity beverage	Invite teachers to a "coffee house." Serve coffee with chocolate ice cream, with nutmeg, with whipped cream, and with chocolate slivers.		

QUANTITY COOKERY: BEVERAGES

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Have a "tea time" for teachers. Serve tea with various garnishes and an assortment of cookies or tea sandwiches. Serve one of the academic classes hot chocolate using a variety of garnishes: whipped cream, ice cream, or marshmallow products. Discuss different types of beverages which can provide our bodies with needed nutrients.		

TRADE VOCABULARY

beverage
instant coffee
drip
coffee beans
malt
cocoa
steep
aroma
decaffeinated
fine grind
caffeine
shake
chocolate
brew
ground coffee
percolator
grounds
tannin
milk
concentrate

CUSTOMER SERVICE PROCEDURES

IX. Customer Service Procedures

Page

Synopsis 539

Performance Competencies 540

Table Preparation 541
    Table Appointments
    Dishes, Glassware, and Flatware Placement
    American Service
    French Service
    Russian Service
    Buffet Service
    Trade Vocabulary

Meeting the Public 551
    Employee Characteristics and Customer Satisfaction
    Difficult Situations
    Trade Vocabulary

Serving Guests 557
    Host or Hostess
    Menu and Food Terms Definition
    Taking Orders
    Passing Orders
    Picking Up Orders
    Serving Food
    Booth Service
    Removing Plates
    Accident Procedures

Page

Serving Guests continued
    Presenting Check
    Payment of Check
    Tipping Etiquette
    Counter Service
    Cafeteria Service
    Drive-in Service
    Room Service
    Trade Vocabulary

Bus Service 585
    Tasks and Procedures
    Trade Vocabulary

Handling Money 591
    Cash Register
    Verifying Cash on Hand
    Change Bank
    Accepting Payment
    Checks and Credit Cards
    Proving Cash
    Trade Vocabulary

CUSTOMER SERVICE PROCEDURES

SYNOPSIS

Quality service is essential to customer satisfaction. Often the customer has direct contact with only this aspect of the food service establishment. The customer sees only the dining area and meets only the service personnel. Quality service begins before the customer arrives: the table must be set in a neat, uniform, and attractive manner.

Customers are satisfied if they are greeted in a pleasant way. The service personnel should cultivate those characteristics which enable them to work well with the public. The food service employee must have the ability to handle smoothly many difficult situations. They have to serve customers quickly, efficiently, and with a minumum of disturbance. Employees should be very familiar with the procedures for taking orders, and they should be acquainted with the menu and the food terms, the procedures for passing orders to the kitchen, and for picking up orders from the kitchen. One who knows the general procedures for serving food is more employable.

Bussing is an important, but sometimes neglected, aspect of food service. Bussing must be efficient; it must give the appearance of a smooth running operation. Efficient bussing will help produce satisfied customers.

While skill in handling money takes practice, it is an important ingredient in customer satisfaction. A person handling money should carefully protect his/her honesty and integrity by following the correct procedures for verifying cash on hand, for setting up a change bank, and for providing cash. If one adopts the standard procedures for accepting payment, it will prevent mistakes.

PERFORMANCE COMPETENCIES

The student will utilize appropriate customer service techniques.

The student will choose customer service techniques which contribute to customer satisfaction.

The student will perform customer service tasks quickly, efficiently, and quietly.

TABLE PREPARATION

COMPETENCIES The student will be able to:

identify the table appointments that make up a cover.
explain the correct placement of dishes, glassware, and flatware for a cover.
attempt to use the correct placement for dishes, glassware, and flatware for a cover.
identify types of service used in restaurants and dining rooms.
describe American service.
explain the correct table set up for American service.
attempt to set up the cover for American service.
describe French service.
explain the correct table set up for French service.
attempt to set up a cover for French service.
describe Russian service.
explain the correct table set up for Russian service.
attempt to set up a cover for Russian service.
describe buffet service.
explain the correct table set up for buffet service.
attempt to set up a buffet service.
identify steps in preparing table setups.
identify the relationship between menus, courses, and table service.
identify table appointments used for specific menus.
illustrate various types of table service.
practice setting up each type of table service.
acquire skill in using each type of table service.
display a desire to use the correct placement of table appointments for courses and for service.

TABLE PREPARATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The type of table service varies among restaurants; it usually depends upon the occasion, the menu, and the number of guests to be served.	Identify the table appointments that make up a cover	View transparencies to identify the table appointments that make up a cover. Define "cover." Name items placed at each cover. Why should each cover look the same for one meal?		
	Explain the correct placement of dishes, glassware, and flatware for a cover	Watch a demonstration to learn the correct placement for dishes, glassware, and flatware at each cover. How far from the edge of the table should the dinner plate and flatware be placed? Where should the knife be placed? In which direction should the sharp edge of the knife be placed? Where should the teaspoon be placed? Where should the fork be placed? In what direction should the tines of the fork turn? Where should the napkin be placed? Where should the open corner of the napkin be placed? Where do you put the water glass? How much space should the handle of the cup turn? Explain the correct placement for dishes, glassware, and flatware for a cover.		

TABLE PREPARATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Attempt to use the correct placement for dishes, glassware, and flatware for a cover	Demonstrate the correct placement for dishes, glassware, and flatware for a cover. Rotate so that each class member can prepare a cover. Let teacher and classmates suggest ways to improve.		
	Identify types of service used in restaurants and dining rooms	View transparencies to learn to identify the types of service used in restaurants and dining rooms. Name the types of services used. Which service is identified as plate service? Which service uses a cart for serving food? Visit restaurants to observe various types of service. Observe American, French, Russian, cafeteria, and buffet service. Note the differences in the same types of table service among various restaurants. Why does each restaurant have its own standard pattern for service? How does a restaurant decide what type of service to use? View slides of types of service used by restaurants. What differences can you see in placement of table appointments in various restaurants? Investigate the service patterns in other cultures using resources materials from the		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		library, and/or interviewing a visitor from a distant country such as China, India, Mexico, Europe, South America, or Africa. Report your findings to the class.		
	Describe American service	Explain American service. When would this type of service be used? What are the advantages of American service? The disadvantages? Why is American service defined as plate service? What is the general rule of American style serving? Which side does the waiter serve solids from? Serve beverages? Remove soiled dishes?		
	Explain the correct table set up for American service	Watch a demonstration to learn the correct table set up for American service. Give the name and purpose of each table appointment.		
	Attempt to set up the cover for American service	Demonstrate the correct placement of table appointments for a cover for American service.		
	Describe French service	Explain the French service. Why is French service called wagon service? How many waiters are involved in French service? How is food brought to the table? What are the advantages		

TABLE PREPARATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		of French service? The disadvantages? What is the general rule of French service? Explain the use of a fingerbowl? Which side of the guest does the waiter serve from? Where are the butter, bread, and salad plates placed? When is the table cleared?		
	Explain the correct table set up for French service	Watch a demonstration to learn the correct table set up for French service. Give the name and purpose of each table appointment. Where is the hors d'oeuvre plate placed? Napkin? Dinner fork? Dinner knife? Soup spoon? Water glass? Wine glass? As coffee is not served during dinner, where is the coffee spoon placed?		
	Attempt to set up a cover for French service	Demonstrate the correct placement of table appointments for a cover for French service.		
	Describe Russian service	Explain Russian service. What are the advantages of Russian service? The disadvantages? Why are empty plates set in front of the guests? How is food transferred from the silver serving platter to the guest's plate? How does Russian service assure equal portions? Why does the waiter serve from the left? When are finger bowls served?		

TABLE PREPARATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the correct table set up for Russian service	Watch a demonstration to learn the correct table set up for Russian service. Give the name and purpose of each table appointment. Where are the following items placed: hors d'oeuvre plate, napkin, dinner fork, dinner knife, soup spoon, water glass, wine glass, and coffee spoon?		
	Attempt to set up a cover for Russian service	Demonstrate the correct placement of table appointments for a cover for Russian service.		
	Describe buffet service	Explain buffet service. How are food, dishes, and silverware served? How is the guest served? What are the advantages of buffet service? The disadvantages?		
	Explain the correct table set up for buffet service	Watch a demonstration to learn the correct table set up for buffet service. Name the location of food, beverage, dishes, and silverware.		
	Attempt to set up a buffet service	Demonstrate the correct arrangement of food, dishes, and silverware for buffet service.		

TABLE PREPARATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
One of the essentials for good service is the correct placement of table appointments.	Identify steps in preparing table setups	Listen to a panel of restaurant managers or employees discuss preparation of the table for customer service. What guidelines are important in preparing a table for customers? Why is an orderly, clean, and well arranged table important? What types of table service are used in the establishment where each panel member works?		
	Identify the relationship between menus, courses, and table service	Look at several set ups for trays for use in restaurants and in hospitals. How are trays used in each? Why should trays be neat, orderly, and attractive? What extra touches can make a tray more appealing?		
	Identify table appointments used for specific menus	View table service accompanied by the menu for which it was prepared. How does table service differ with different menus? Name the courses which may be included in breakfast, lunch, and dinner. Visit restaurants or view slides to observe the table service for specific menus. Which table appointments are used only if a particular food item is included in the menu? Where are the following table appointments placed on the table: relishes, crackers, salads, soup,		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		rolls, butter, appetizers, and appropriate condiments? Which table appointments are considered basic to most menus?		
		View pictures or actual set ups of various types of table service. Identify each type. Are the table appointments always in the same place for a specific type of table service? Why?		
	Illustrate various types of table service	Work in small groups to illustrate a specific type of table service. Draw a slip of paper on which a type of table service is written. Use resources such as handouts, bulletin boards, or other available illustrations to set up the appropriate table service.		
		Check table set ups for other group members. Are all table appointments in their proper places? Are all necessary appointments included on the table? If not, what changes need to be made?		
		Work with a list of food items and a display of numbered dishes, glassware, and flatware. Place the number of each piece(s) of tableware that would be included in the cover if serving a specific menu.		

TABLE PREPARATION

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Correct table service promotes customer satisfaction.	Practice setting up each type of table setting	Carry out preparation of the table for a specific type of table service. Work in groups and prepare a table for the type of table service assigned the group.		
	Acquire skill in using each type of table service	Prepare and serve meals using the different types of table service. Set up the tables for a specific menu using a specific type of table service.		
	Display a desire to use the correct placement of table appointments for courses and for service	Match placement of table appointments to the appropriate service and course when preparing a table. Check to see if the table is set in a neat, orderly manner.		

TRADE VOCABULARY

menu

table service

table appointments

setup

cover

edge of cloth

set line

Russian Service

American Service

French Service

finger bowl

hors d'oeuvre plate

cafeteria

buffet

MEETING THE PUBLIC

COMPETENCIES The student will be able to:

identify employee characteristics which contribute to customer satisfaction.
give examples of personal characteristics of employees which contribute to customer satisfaction.
indicate employee characteristics which contribute to customer satisfaction.
display desirable employee characteristics.
identify difficult situations which may occur in a food service establishment.
react to difficult situations which occur in a food service establishment.
choose to take suitable actions in a difficult situation.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
As a food service employee, one should know that certain characteristics promote success.	Identify employee characteristics which contribute to customer satisfaction	View a filmstrip or transparencies which point out employee characteristics that are important for customer satisfaction. What characteristics are pointed out as being important for an employee? What little extras can contribute to customer satisfaction? Why is it important to get along with other employees? Find the employee characteristics listed at the bottom of the Customer Seeker game. Circle the words that you find in the game. Listen to a panel of restaurant managers or employers discuss desirable employee characteristics. (1) How should a customer be greeted?		

930

931

MEETING THE PUBLIC

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		(2) What characteristics can the employee display which will contribute to customer satisfaction? (3) How can courtesy be extended to a customer?		
The attitude of an employee helps determine customer satisfaction.	Give examples of personal characteristics of employees which contribute to customer satisfaction	Illustrate examples of employee characteristics which contribute to customer satisfaction by preparing a bulletin board depicting these characteristics.		
	Indicate employee characteristics which contribute to customer satisfaction	Watch short skits or read case studies which display employee characteristics. What characteristics were displayed? Which are desirable for an employee? React to a list of employee characteristics by circling those which you feel contribute to customer satisfaction. How may the role of the employee vary with the type and degree of formality of the establishment?		

MEETING THE PUBLIC

Key Concept	Competency	Suggested Activities	Resources	Evaluation
If employees use interpersonal skills in dealing with customers, both the employees and the customers will be happy.	Display desirable employee characteristics	Exhibit employee characteristics which contribute to customer satisfaction. Make every effort to please guests in the laboratory. Role play situations involving employees meeting the public. Display undesirable and desirable employee characteristics in the situations depicting the poor behavior first. Design a poster illustrating how the food service employee should meet the public. Review the interpersonal skills used in interacting with customers. See section entitled Sanitation: Personal Sanitation.		
A happy and successful food service employee has the ability to handle difficult situations.	Identify difficult situations which may occur in a food service establishment	Listen to a panel of food service managers or employees discuss difficult situations which may occur in a food service establishment. What difficult situations may occur with customers in a food service establishment? How can such situations be handled? What problems are frequently associated with elderly persons, blind guests, ill customers, noisy customers, early and late customers, angry customers, and children?		

MEETING THE PUBLIC

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	React to difficult situations which occur in a food service establishment	Watch skits illustrating difficult situations which occur in food service establishments. Include customer complaints, early or late customers, grouchy or angry customers, uncontrolled children, and handicapped customers. Discuss first impressions of an establishment which may result from such encounters. View filmed situations or skits depicting a difficult customer situation. What would you have done in this situation? Why? What else could be done in the same situation which would yield satisfactory results?		
	Choose to take suitable actions in a difficult situation	Set goals periodically for improving one problem you have in customer relations. Report your probress to teacher. Role play difficult customer situations. Display actions which result in satisfactory correction of the difficulty.		

938

CUSTOMER SEEKER

DIRECTIONS: Find the words listed below in the word search game. The words may be spelled vertically, horizontally, or diagonally. Circle each word located.

F	R	I	E	N	D	L	Y	A	C	P
T	E	Z	S	P	R	O	L	F	H	Y
A	M	C	I	O	A	Y	S	A	R	D
C	O	O	P	E	R	A	T	I	V	E
T	E	U	G	H	L	L	A	V	G	B
F	A	R	S	Q	B	O	R	C	E	C
U	K	T	G	P	L	T	X	S	A	H
L	D	E	P	E	N	D	A	B	L	E
N	R	O	A	O	V	C	P	S	A	E
A	F	U	T	F	L	A	B	I	S	R
R	M	S	I	M	S	I	O	N	A	F
W	S	P	E	T	O	Y	T	C	O	U
O	O	E	N	Q	K	R	A	E	P	L
M	Q	C	T	M	T	L	E	R	I	D
A	R	E	N	F	A	O	W	E	R	H

WORDS TO LOCATE:

Friendly	Patient	Courteous	Polite	Cheerful
Cooperative	Sincere	Tactful	Loyal	Dependable

TRADE VOCABULARY

cooperative

courteous

loyal

friendly

sincere

punctual

adaptability

patience

respectful

tactful

self-discipline

polite

dependability

enthusiastic

thoughtful

characteristics

customer

SERVING GUESTS

COMPETENCIES The student will be able to:

identify the duties of food service personnel in serving customers.
state the responsibilities of the host or hostess.
explain the procedures for a host or hostess in welcoming the guest.
summarize the procedure used by the host or hostess for the departing guest.
explain how the host or hostess should handle complaints.
describe the responsibilities of the host or hostess in supervising the dining serving hours.
describe the supervisory duties of the host or hostess in preparing the dining room before serving hours.
explain the responsibilities of the host or hostess in supervising the closing of the dining room.
present correct methods of handling the responsibilities of the host or hostess.
define menu and food terms.
describe menu items to guests.
pronounce menu and food terms correctly.
state abbreviations for menu items.
state procedures for taking orders.
list steps in writing the order.
illustrate steps in taking and writing orders.
demonstrate ability to take and write an order.
determine correct procedures for taking orders.
cite procedures for passing an order to the kitchen.
illustrate procedures for passing an order to the kitchen.
demonstrate ability to pass an order to the kitchen correctly.
state procedures for picking up an order.
cite procedures for loading and carrying a tray.
identify accidents which may occur in transporting food.
attempt to carry a tray properly.
execute correct procedures for loading, lifting, and bringing down a tray.
identify the procedure used to serve food.
explain the correct procedure for serving food.
cite correct order of service.

SERVING GUESTS

COMPETENCIES The student will be able to:

- illustrate correct order of service
- state order in which foods are served.
- cite procedures for serving specific foods.
- describe procedures for serving specific foods.
- demonstrate the correct procedure for serving food.
- employ booth service.
- cite procedures for removing plates.
- practice removing plates.
- use correct procedure for removing plates.
- summarize procedures for serving guests.
- show the correct procedure for serving guests.
- name accidents which might occur in serving food.
- describe what should be done in case of an accident.
- demonstrate acceptable procedures when an accident occurs.
- identify the procedure for preparing and presenting the check.
- list information to be included on the check.
- illustrate the correct procedure for presenting the check.
- utilize correct procedure to present the check.
- identify procedure for payment at the table using a change tray.
- illustrate the correct procedure for presenting the check using a change tray.
- cite etiquette in tipping.
- react to a situation involving tipping.
- display proper etiquette in receiving tips.
- define counter service.
- list the order of counter service.
- illustrate counter service.
- employ counter service.
- cite procedures for cafeteria service.
- explain the duties in cafeteria service.
- demonstrate cafeteria service.
- list general procedure for service at a drive-in restaurant.
- describe procedure for service at a drive-in restaurant.

SERVING GUESTS

COMPETENCIES The student will be able to:
define room service.
describe the procedure for preparing an order for room service.
identify the procedures for preparing an order for room service.
list rules for room service.
identify procedure for serving a guest in a hotel room.
demonstrate room service procedures.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Each food service employee is responsible for a specific serving task.	Identify the duties of food service personnel in serving customers	View a filmstrip, transparencies, or other visuals, identifying duties of the host, hostess, waiter, and waitress in serving guests. Define "guests." What tasks are performed by each employee? What duties are each employee's responsibility? Visit a food service establishment to observe the host, hostess, waiter, and waitress. Note the tasks performed by each employee. Watch a pantomime or role play of persons playing parts of host, hostess, waiter, or waitress. Identify the employee illustrated. Work with a list of duties to decide which are the responsibilities of each food service employee. Indicate the correct employee beside each task.		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Draw slips of paper from a container on which employee duties have been written. Tell which employee is responsible for the task which you draw.		
	State the responsibilities of the host or hostess	View a filmstrip or transparency to learn the responsibilities of the host or hostess. What are the responsibilities of the host or hostess?		
	Explain the procedures for a host or hostess in welcoming the guest	Describe the procedure for the host or hostess in welcoming the guest. Why should the host or hostess remember the names of frequent guests? Explain how the host or hostess determines the number of people to be seated. How should the host or hostess handle the problem of guests waiting for a table? Explain the procedure for escorting guests to table. Where should elderly persons or persons in wheelchairs be seated? Why should the host or hostess remember seating preferences of frequent guests? Explain the procedure for seating a woman alone. When does the host or hostess present the menu?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Summarize the procedure used by the host or hostess for the departing guest	Describe the procedure used by the host or hostess for the departing guest. When should guests be assisted with wraps? Why should the host or hostess express the hope that the service is satisfactory and that they will come again. Why is it important to offer the guests a pleasant good-bye?		
	Explain how the host or hostess should handle complaints	Describe the appropriate procedure for handling complaints. Why shouldn't the host or hostess argue with the guest? Explain the statement: "The guest may not always be right, but he is never wrong." Why should the host or hostess approach the customer in a friendly spirit and not allow himself/herself to be put on the defensive? Why should the host or hostess acknowledge a mistake promptly? Why should the host or hostess express sincere regret for the occurrence? Why should the host or hostess offer to exchange or substitute food which is unsatisfactory? Why should the host or hostess report difficult and unreasonable complaints to the manager for settlement? Why should the host or hostess report all serious complaints and those involving business policy and regulations to the management?		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe the responsibilities of the host or hostess in supervising the dining serving hours	Explain the responsibilities of the host or hostess in supervising the dining room during serving hours. Why is it important to make sure that each guest receives prompt, efficient service? How should the host or hostess alert employers to needs of guests? Why should the host or hostess check the quality and appearance of food being served? Why should the host or hostess make sure guests are satisfied with foods and service? Why is it necessary for the host or hostess to keep an eye on the appearance, manner, and conduct of employees? How should the host or hostess keep track of clean tables that are available?		
	Describe the supervisory duties of the host or hostess in preparing the dining room before serving hours	Explain the supervisory duties of the host or hostess in preparing the dining room before serving hours. Why should the host or hostess go over the menu with employees and alert them to specials of the day? Summarize the items to be checked in making sure the dining room is set up properly. Explain how the host or hostess plans the seating of guests. Why should the host or hostess refer to the reservation book and make sure enough tables are set? Why should the host or hostess check to see that all employees are on duty and that they have a clean, neat appearance?		

949

950

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the responsibilities of the host or hostess in supervising the closing of the dining room	Explain the responsibilities of the host or hostess in supervising the closing of dining room. Why should the host or hostess check to see that all the closing duties of waiters are completed before they leave the floor? Why should the host or hostess collect all guest check books from waiters and waitresses?		
	Present correct methods of handling the responsibilities of the host or hostess	Work in groups to role play the appropriate method for handling the responsibilities of the host or hostess. Role play may include welcoming guests, saying good-bye to guests, supervising dining room during serving hours, handling guest complaints, supervising dining room before serving hours, and supervising the closing of the dining room.		
Customers will be satisfied if their orders are taken and their food is served promptly.	Define menu and food terms	Study a list of menu terms and food terms which the host, hostess, waiter, and waitress should know. Practice defining the words as teacher names them.		
	Describe menu items to guests	Listen to a tape recording of menu terms and food terms which the food service employee should know. Pronounce each word correctly as it is given on the tape. Look at the list of words as you pronounce them. When you feel		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		you can say each word correctly, pronounce the words on the list to the teacher. Review any words you have not pronounced correctly.		
	Pronounce menu and food terms correctly	Study sample menus. Which foods might already be prepared? Which would be cooked to order? How would you know when "in season" items are available? How would you know daily specials, soups, and garnishes? Study a sample menu. Learn how each item is prepared and the time required. Which items would you suggest to a customer who is in a hurry? Which items would take longest to prepare? Why should you tell a customer the time required to prepare an item if it takes a long time? Why might you suggest an appetizer to a customer who chooses a slow dish?		
	State abbreviations for menu items	Practice describing menu items to a partner. Study a list of menu items and their abbreviations. Practice writing the abbreviations as you listen to a tape recording of the menu items.		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	State procedures for taking orders	Listen to a waiter or waitress describe procedures for taking orders. Who does the waiter address when taking an order from a couple? From two men or two women? From a group. Visit a food service establishment to observe procedures for taking a customer's order. Why is it important to know the menu? Watch a demonstration on taking orders in the food service lab. Let class members role play guests. Why should the waiter or waitress be discrete and modest in assisting the guest in ordering? In pronouncing menu terms for him/her? Listen to taped interviews of waitresses or food service employees describing the procedures for taking and placing a customer order. How does the employee know when the customer is ready to order? How are orders recorded? How does the employee remember which order belongs to each person?		
	List steps in writing the order	Watch as the teacher shows how to write an order on the overhead projector. Note the following steps in writing the order.		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		1. Make the number of copies required, using carbon if making more than one copy. Write legibly. 2. Include your number, the table number, and which guests have ordered what dishes. (Number the chairs clockwise from a given point or note the direction each guest is seated as N, W, S, E.) Write signs indicating seats in a column at the left; then make columns to indicate courses or write courses in order under each number. 3. Use legible abbreviations. For example: capital letters for main dishes, a comma, then garnishes in small letters. Indications like "well done" may be written in a circle next to the item. 4. Repeat each order as it is given. 5. Clarify how meats and eggs are to be cooked, the dressing or garnishes chosen, the style desired such as baked, fried, or boiled, and the choice of vegetable. 6. Write out any special comments or instructions. 7. Remove menus. 8. Say "Thank You."		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Illustrate steps in taking and writing orders	Develop cartoons or instant slides to illustrate procedures for taking and writing orders. Check to see if you left out any steps. Practice writing an order as the teacher provides the information using an actual menu pad.		
	Demonstrate ability to take and write an order	Work in groups to practice taking orders. Let one person take the order as others play the part of guests. Use correct abbreviations for menu items when taking orders. Rotate until everyone in your group has taken an order. Watch skits presented by classmates or view a filmed situation of persons taking customer orders. What was done correctly? What was done incorrectly? What changes would improve the procedure used by the person taking the order? Take orders from customers during food service lab. Use the menus developed by the teacher for the lab and an actual order pad. Why is it important to write legibly? To clarify each order? To use legible abbreviations?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Determine correct procedures for taking orders	Use checklist to rate a classmate who is taking orders. Work in groups giving everyone the opportunity to rate all other group members.		
	Cite procedures for passing an order to the kitchen	Listen as a waitress describes procedures for passing an order to the kitchen. How does the waitress decide whether to pass the order to the kitchen immediately? How can she be sure slow foods are started first? What procedure is used to pass the order in a small kitchen? In a large kitchen? Which items on the order would not be passed to the kitchen? What is meant by the terms "ordering," "put on," and "picking up"? Make a table showing the time required to prepare each item on the food service menu. How would such a table aid the waiter or waitress in determining when foods should be put on?		
	Illustrate procedures for passing an order to the kitchen	Role play procedures in passing an order to the kitchen. What should the waitress do if the guests choose to have an appetizer? If one guest selects an item that takes longer to prepare?		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Demonstrate ability to pass an order to the kitchen correctly	Pass orders from customers in the food service lab to the kitchen following the established procedure.		
	State procedures for picking up an order	Watch a waitress pick up an order. Which items did the waitress serve? How did she announce that she was picking up the order? How might the procedure differ in a larger or smaller establishment? How did the sequence used for picking up compare with the following: 1. Collect all serving equipment and needed for food and accompaniments. 2. Pick up cold foods (place away from where hot foods will go on tray). 3. Pick up hot foods last (covered, if possible). 4. Pick up hot plates and cold plates. Does the waitress inspect the order? List questions which might be asked when inspecting an order. Have you included the following: Is the order correct? Is it as the guest ordered it? Is it attractive? Are you proud to serve it? What should the waitress do if the order is incorrect?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Cite procedures for loading and carrying a tray	Watch a waiter demonstrate procedures for loading and carrying a tray. Where are the heaviest items placed? The lightest items? Why are full cups not placed on saucers? Why shouldn't hot dishes touch cold dishes? Why should tea and coffee pot spouts be turned in and away from plates of food? Why may the tray be covered with a large clean napkin before loading? How is the tray picked up? Where should it be carried if it is large? If it is small? How is the tray brought down? Why is it important not to overload the tray?		
	Identify accidents which may occur in transporting food	Brainstorm to list accidents which may happen in transporting food from the kitchen. How can each be prevented?		
	Attempt to carry a tray properly	Practice carrying an empty tray using the procedures demonstrated. When you can lift, carry, and put down the tray with confidence, add books or other unbreakable items and practice carrying a loaded tray. Increase until weight is comparable with a tray of food.		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Execute correct procedures for loading, lifting, and bringing down a tray	Carry trays loaded with food as needed during food service labs. Load, lift, and bring down trays following correct procedures.		
Customers will be satisfied if the correct serving procedures are followed.	Identify the procedure used to serve food	Observe a filmstrip or transparencies illustrating the correct procedure for serving food. From which side is the beverage served? The main course? From which side do you remove dishes from the table? How should glassware, flatware, and dishes be held? What is the correct procedure for refilling beverage glasses and cups? In what order are foods served? What should be done if a customer has an accident? Study a handout illustrating correct procedure for serving food items, for serving beverages, and for removing table appointments. Observe a demonstration showing correct procedures for serving various foods. List basic rules for serving food. Observe a demonstration on procedures for serving food at a booth. Which guest is served		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		first? How do you stand when serving? Which hand is used for serving each side of the table?		
	Explain the correct procedure for serving food	Examine a list of menu items. Indicate whether each item is served to the guest from the right or left.		
	Cite correct order of service	Listen as a waiter or waitress explains the order of service. Who is served first when serving a couple? Two couples? Three couples? More than three couples? Other than couples?		
	Illustrate correct order of service	Study case situations and diagrams illustrating seating arrangement of different size parties. Place numbers by the persons shown in the diagram to tell the order in which they should be served.		
	State order in which foods are served	Study a handout illustrating the order of service for breakfast, lunch, and dinner. Practice placing cards naming these steps in the correct order.		
	Cite procedures for service specific foods	Interview waiters and waitresses to learn how to serve specific foods. How should the following foods be served: sauces, soup, melon,		

969

970

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		grapefruit, pasta, eggs, salads, desserts, cheese, fresh fruit, and coffee.		
	Describe procedures for serving specific foods	Explain how specific foods are served as you play spin the bottle. Spinner names a food, person to whom the bottle points must describe how to serve that food.		
	Demonstrate the correct procedure for serving food	Practice using the correct techniques for serving food.		
	Employ booth service	Set up the food service lab for booth service. Use correct techniques when serving.		
	Cite procedures for removing plates	Watch a demonstration on removing plates. Why are plates not removed until everyone is finished and the next course is ready to be served? From which side are plates removed? To which hand is plate transferred if picking up more than one plate? How are plates scraped? Why should plates not be scraped in front of guest?		
	Practice removing plates	Role play to practice removing plates using the procedure outlined by the teacher. Ask students who play the roles of guests to suggest ways to improve.		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Use correct procedure for removing plates	Remove plates from tables when serving as waiter or waitress in the food service lab.		
	Summarize procedures for serving guests	Draw a slip of paper from a container. The paper will have one serving task written on it. Describe the correct procedures for performing the task when serving guests. Practice placing steps in serving a meal in the correct order.		
	Show the correct procedure for serving guests	Work in groups to show the correct procedure for taking orders, passing orders to kitchen, picking up orders, and serving guests. Designate some persons to serve as waiters and waitresses and other group members to play the role of guests. Rotate until everyone has served. Use a checklist for serving to check each member's serving procedures.		
	Name accidents which might occur in serving food	Listen to taped interviews with waiters and waitresses on accidents which they have seen occur in serving food and explain how each situation was handled.		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Make a list of accidents which may occur when serving food. How can each be prevented? How should each be handled?		
	Describe what should be done in case of an accident	Look at pictures illustrating accidents in a restaurant. What is happening? What should the restaurant personnel do in such a situation?		
	Demonstrate acceptable procedures when an accident occurs	Work in groups to show what to do if an accident occurs. Role play the specific accident assigned to your group. Does the waitress handle the situation appropriately? What other actions may have been taken? What would you do in this situation?		
		Handle accidents which occur in the food service lab effectively. Ask the teacher for assistance if you do not know what to do.		
Taking the order and presenting the check efficiently are essential.	Identify the procedure for preparing and presenting the check	Listen to restaurant managers or employers explain the correct procedure for preparing and presenting the check. Where is the check figured? When should separate checks be made? Why should prices and arithmetic be checked carefully before presenting check? When is the check presented to the customer? How is		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		the check presented to the customer? Where should the check be placed when the host is known? When the host is not known? When a man or woman are dining together? How should any complaints be handled?		
		Observe a demonstration on the procedure to be used in the food service lab for preparing and presenting checks. What steps are involved in the procedure? When is the check presented to the customer?		
	List information to be included on the check	View a transparency of a completed check. List the information included.		
	Illustrate the correct procedure for presenting the check	Present skits of employees presenting checks to guests. Which employee presented the check correctly? What was done wrong in presenting the check to the other guests? Did the employee present the check at the correct time? If not, when should the check have been given to the customer?		
	Utilize correct procedure to present the check	Role play situations depicting an employee presenting a check to a customer. Was the correct procedure followed? If not, what		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		improvements could be made in presenting the check? Work in groups to practice the correct procedure to use when presenting checks to guests. Give each person in the group the opportunity to present the check. Was the correct procedure used by all group members or are improvements needed? Present checks to guests during food service lab, observing correct procedures.		
	Identify procedure for payment at the table using a change tray	Observe a demonstration on procedure for using a change tray for payment at a table. Define "change tray." Explain the procedure for payment at the table using a change tray. When is the change tray presented to the table? Removed from the table? When change tray is returned to the table with change, where is the change tray placed? Why isn't it necessary to count the change to the guest?		
	Illustrate the correct procedure for presenting the check using a change tray	Practice using the correct procedure for presenting a check using the change tray. Why should you call out the denomination of the currency the guest gives you? Why shouldn't you call back the amount of the check?		

979

980

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The quality of the service a customer receives determines the amount of the tip the waiter or the waitress will receive.	Cite etiquette in tipping	Listen to a panel of food service managers discuss tipping etiquette. What is the customary tip? How should the employee receive a tip? What do customers consider when tipping an employee? What should an employee do when given a smaller tip than he/she feels is appropriate? Should the amount of tip a customer gives influence the quality of service the employee gives in the future? What are customary procedures for sharing tips with the bus boy or bus girl? Listen as a classmate reports on the origin of tipping. Discuss how the students feel about tipping.		
	React to a situation involving tipping	Watch skits involving employees receiving tips. Were the employees courteous to the customer? Were the employee's attitudes desirable in the situation? If not, what should the employee have done?		
	Display proper etiquette in receiving tips	Role play situations to exhibit appropriate behavior when receiving tips. Include actions when customers do not tip as well as customers who leave generous tips.		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Interpersonal skills contribute to customer satisfaction and promote job satisfaction for waiters and waitresses in all types of food service establishments.	Define counter service	Brainstorm to name places where food is served at a counter. List characteristics of counter service. Define "counter service."		
	List the order of counter service	View a film or listen as a counter waitress describes procedures for serving from the time the customers sit down until they leave. In what order are guests served? When is the check presented? When is the counter cleared? Why is it important to keep the work area spotless?		
	Illustrate counter service	Role play procedures for counter service. Greet guest. Bring filled water glass and napkin. Present menu. Take order. Call in the order. Set cover. Serve and remove each course. Clean counter after main course. Place check, face down, at guest's left. Thank the guest.		
	Employ counter service	Set up the food service lab for counter service. Use correct techniques when serving.		
	Cite procedures for cafeteria service	Observe procedures used for serving in the school or other cafeteria. What personnel are required? What are the duties of cafeteria serving personnel? Supply person? Food checkers? Bus boys/bus girls?		

983

984

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Explain the duties in cafeteria service	Describe the duties in cafeteria service in your own words. Find pictures or draw cartoons to illustrate various duties.		
	Demonstrate cafeteria service	Set up the food service lab for cafeteria service for several meals. Rotate jobs until everyone has served, supplied the counter, and been a food checker and a bus boy/bus girl.		
	List general procedure for service at a drive-in restaurant	Observe procedure for service at a drive-in. List the main steps in the procedure.		
	Describe procedure for service at a drive-in restaurant	Recall the service procedure at drive-ins you have visited. How does it compare with procedures listed? How is the procedure different when the drive-in has an automatic ordering system?		
	Define room service	Listen as the teacher describes room service. What kinds of room service are offered? Why is room service offered? Who is responsible for room service? Define "room service."		

SERVING GUESTS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe the procedure for preparing an order for room service	Interview motel or motel restaurant managers on procedures for handling room service. List the procedure for preparing an order for room service. Include procedures for: (1) taking the order, (2) calling in the order to kitchen, (3) assembling table appointments on tray, (4) placing food on the tray, and (5) inspecting the tray.		
	Identify the procedures for preparing an order for room service	Portray procedures for preparing an order for room service. Was the procedure carried out correctly? If not, what was done wrong?		
	List rules for room service	Observe a demonstration on correct procedure for serving a guest in a hotel room. Demonstrator should include: (1) knock on guest room door saying "Room Service," (2) greet the guest, (3) ask where the tray or table should be placed, (4) if table is used, raise sides, (5) place coffee cup right side up, (6) ask guest whether further service is required, (7) present guest the check, (8) thank the guest and leave.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Identify procedure for serving a guest in a hotel room	Brainstorm to list rules for room service. Examples: 1. Treat guest with same friendly, courteous manner he would receive in dining room. 2. Be sure all accessories are on the tray, especially salt, pepper, sugar, cream, butter, and sauces. 3. Deliver hot foods hot. 4. Deliver order promptly.		
	Demonstrate room service procedures	Take orders from teacher or other school personnel over the phone. Assemble tray, and serve meal to each room or office using room service procedures. Prepare a checklist on room service procedures. Rotate duties until all class members have performed room service procedures. Use a checklist to evaluate performance.		

TRADE VOCABULARY

host
hostess
waiter
waitress
guest
menu
order
ordering
put on
pick up
room service
inspect
check
change tray
complaint
tip
accuracy

BASIC RULES FOR TABLE SERVICE

1. Serve all food from left, unless inconvenient for guest.
2. Serve all beverages from right. Fill water glasses 2/3 to 3/4 full.
3. Clear from right unless instructed to clear from left.
4. Do not stack plates or scrape plates in front of guest.
5. Never leave a guest's place bare--one course should follow another.
6. When replacing one course with another, remove from right with right hand, serve from left with left hand.
7. Serve hot foods first, then cold foods.
8. Serve everyone in the party the same course at the same time.
9. Crumbs, bread, and side dishes should always be removed before dessert is brought.
10. Fill water and beverage dishes, replace cutlery, clear away side dishes, bring bread, empty ash trays--before being asked.

BUS SERVICE

COMPETENCIES The student will be able to:

identify the tasks involved in bus service in the dining area.
give examples of the tasks involved in properly bussing the dining area.
identify the general procedures for performing bus service tasks.
illustrate the general procedures for performing bus service tasks.
identify the procedures involved in bus service tasks.
present the procedures for bus service tasks.
practice bussing tasks.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To have a smooth operation, bussing of the dining area must be efficient.	Identify the tasks involved in bus service in the dining area	View a film or filmstrip on bus service in the dining area. What tasks are involved in bus service? Who is responsible for these tasks. Study a handout on bus service tasks. Wny is bus service important? Who performs bussing duties? Listen to a panel of food service personnel discuss bus service in the dining area. What tasks are involved in bus service in the dining area? Observe a bus boy work in a dining room. Note the tasks he performs. Ask questions to clarify details.		

BUS SERVICE

Key Concept	Competency	Suggested Activities	Resources	Evaluation
The more efficient the bussing, the cleaner the area will be.	Give examples of the tasks involved in properly bussing the dining area	Find pictures which illustrate tasks in bussing the dining area. Label the pictures and display them on a bulletin board. Study a list of food service tasks. Check or circle those which are included in bussing the dining area.		
	Identify the general procedures for performing bus service tasks	Listen as the teacher discusses being cooperative, doing job promptly and quietly, and following sanitation rules while performing bus service tasks. Why is each of these important?		
	Illustrate the general procedures for performing bus service tasks	Role play each of the general procedures for bus service. Have classmates discuss and point out errors in the service.		
	Identify the procedures involved in bus service tasks	Examine cards listing the steps in particular bus service tasks. Cite the steps included in each task for bussing the dining area. Example: Removing soiled items from tables and stations: 1. Use trays or carts to save steps and decrease amount of time spent on the task.		

BUS SERVICE

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		2. Pick up glassware by the base, utensils by the handle, and plates by the rim. 3. Put heavy dishes on tray first and toward the center. 4. Separate silver and pile it on one side of tray with all handles one way. 5. Place cups, bowls, cream pitchers, teapots on top of plates, nestled securely. 6. Place water glasses in one section. Cocktail glasses are placed on a separate tray. 7. Do not overload tray and be sure weight is evenly distributed.		
	Present the procedures for bus service tasks	Watch skits or filmed situations of an employee performing various bussing tasks. Were all tasks done correctly? If not, what steps need to be changed in the procedure used to do the task. Check by using cards with steps listed on them.		
Efficient bussing promotes customer satisfaction.	Practice bussing tasks	Work with a partner to demonstrate the correct procedure for one task such as stacking dishes from the table; disposal of soiled dishes, silver, glassware, linen, and waste, replenishing beverages, clearing and cleaning tables; or performing other bussing tasks.		

BUS SERVICE

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Practice bussing tasks in the food service lab. Rotate so all class members perform bussing tasks.		

TRADE VOCABULARY

silver

glassware

service station

cart

tray

relish or condiment container

housekeeping chores

BUS SERVICE TASKS

1. Clear tabletops.
2. Carry dirty dishes to kitchen.
3. Clean tabletops.
4. Dust chairs after each guest leaves.
5. Clean ashtrays.
6. Place chairs and tables in orderly manner.
7. Change table linens.
8. Set table with clean items.
9. Clean and fill condiment containers.
10. Fold napkins.
11. Clean up spills and breakage to prevent accidents.
12. Stock service station.
13. Sort, count, and store utensils at proper storage place.
14. Serve water, coffee or tea, and rolls and butter.
15. Make coffee.
16. Fill water pitcher.
17. Stock roll bin.
18. Clean serving trays and cart.
19. Clean floors.

HANDLING MONEY

COMPETENCIES The student will be able to:

- identify the appropriate procedure for handling money.
- cite the procedures for setting up cash registers.
- describe the procedure for verifying cash on hand.
- compute cash on hand to verify cash.
- explain how to set up a change bank.
- prepare the change bank.
- cite the procedure for accepting payment.
- explain the procedure to be used in the food service lab for accepting payment.
- demonstrate the ability to handle money.
- desire to be accurate in handling money.
- cite the procedures for accepting checks and credit cards.
- illustrate the procedures for accepting checks and credit cards.
- cite the procedures for proving cash.
- describe the procedure for proving cash.
- compute cash taken in to prove cash.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
A food service employee must know how to handle money.	Identify the appropriate procedure for handling money	Listen to a food service manager or employee discuss handling money in a commercial food service establishment. What are the functions of a cashier? What are the cashier's duties?		
	Cite the procedures for setting up cash registers	Listen as a food service cashier explains how to verify cash on hand and set up the change bank at the beginning of a shift. Why should cash be verified at the beginning of each shift? What procedures are used for setting up the change bank?		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Describe the procedure for verifying cash on hand	Explain the procedure for verifying cash on hand to a partner.		
	Compute cash on hand to verify cash	Total sample checks, play money, and coins to verify the report of cashier provided by teacher. Verify cash on hand as needed in the food service lab.		
	Explain how to set up a change bank	Describe in your own words how to set up a change bank. What is the purpose of the change bank?		
	Prepare the change bank	Practice preparing a change bank using the money according to instructions given by teacher. Prepare the change bank for the food service lab at least once during the year.		
One must practice making change to become skilled in handling money.	Cite the procedure for accepting payment	Watch a filmstrip on handling money. How is the amount of change needed determined? How is sales tax figures? How is money counted as change is given to the customer?		

HANDLING MONEY

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Study a handout on the correct procedures for receiving payment.		
		Observe a teacher demonstration of the procedure to be used in the food service lab to handle money.		
	Explain the procedure to be used in the food service lab for accepting payment	Work with a partner using play money to explain how to make change. The teacher will provide a problem specifying the amount of money given to the cashier, the amount of the bill, and the amount of change for the customer. Count the correct amount of change to your partner as if he/she were a customer.		
		Illustrate the procedure to be used in the food service lab for handling money by arranging steps for handling money in order. The teacher will provide a list of steps to arrange in order.		
		Work in groups to practice handling money. Each person should make change for a specific customer bill.		
	Demonstrate the ability to handle money	Solve specific problems involving making change for customers without using pen and paper. Check answers with the teacher.		

HANDLING MONEY

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		Role play situations to practice handling money. Each person should serve as cashier to practice making change. Serve as cashier for food service lab when serving customers. Rotate so everyone can have the opportunity to practice handling money.		
Money must be handled efficiently in food service.	Desire to be accurate in handling money	Discuss how the customer feels when the cashier makes a mistake in giving him change. How may the customer react if he receives too little change? How may he react if he receives too much change? What role does honesty play in these situations? If you make the mistake who pays for it?		
	Cite the procedures for accepting checks and credit cards	Interview food service managers to learn common policies for accepting checks and credit cards.		
	Illustrate the procedures for accepting checks and credit cards	Role play to show procedures for accepting checks and credit cards.		

HANDLING MONEY

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Cite the procedures for proving cash	Listen to a cashier describe procedures for proving cash. Who may supervise proving cash? Why should it be done out of sight of the public? What information is included in the cashier's report?		
	Describe the procedure for proving cash	Explain the procedure for proving cash to a partner.		
	Compute cash taken in to prove cash	Use a problem and play money provided by teacher to practice proving cash. Total checks, bills, and coins. Subtract the change bank to get amount taken in during your shift. Subtract old reading from new reading on cash register to get cash receipts. Compare with figure for amount taken in during your shift. Prepare cashier's report. Record receipts and cash on hand. Note any shortage or overage. Prove cash each time you serve as cashier in the food service lab.		
		NOTE TO TEACHER: This is a good opportunity for introducing		

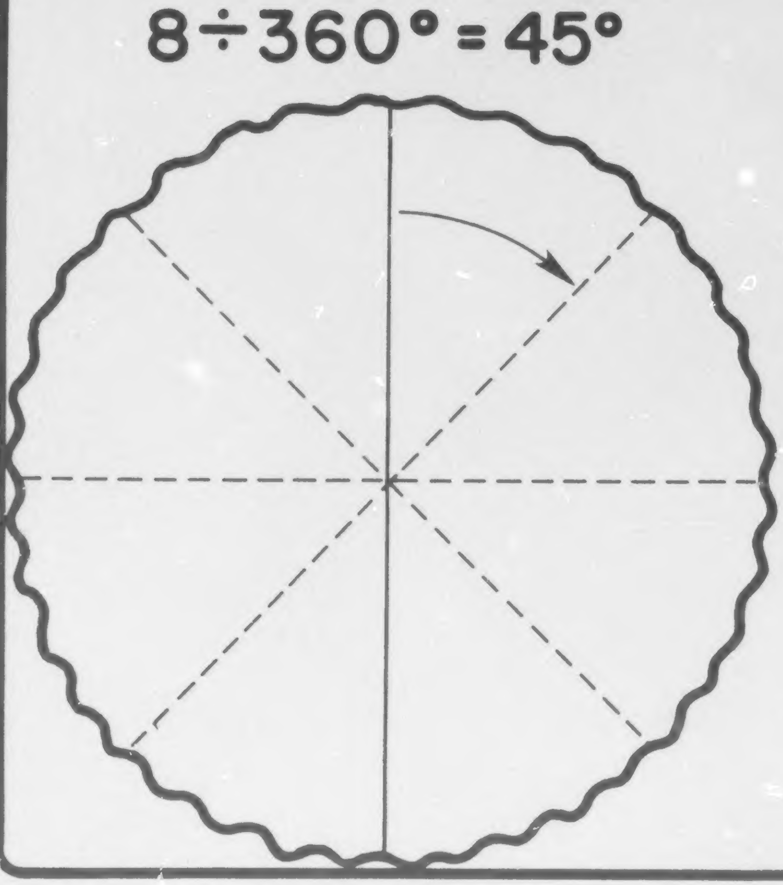
Key Concept	Competency	Suggested Activities	Resources	Evaluation
		business math as it relates to food service. This time could be used to introduce cost control, principals of management, and the career possibilities of business related occupations in food service.		

TRADE VOCABULARY

cashier
verify
cash on hand
change bank
change
sales tax
check
credit card
proving cash
cashier's report
shortage
overage

RECEIVING PAYMENT

1. Take guest check and money.
2. State the amounts of check and money. Example: $2.25 out of $5.00.
3. Place guest check and money to one side of cash register.
4. Record the sale on the cash register.
5. Count out change from drawer.
6. Count out loud as you hand the change to the guest. Repeat the amount of the check, then count up from smallest coin to largest bill. Example: $2.25, $2.50, $3.00, $4.00, and $5.00.
7. Hand bills to guest face up.
8. Thank the guest.
9. Place money in the drawer.
10. File guest check.



FOOD SERVICE MATH

X. Food Service Math

Page

Synopsis 600

Performance Competencies 601

Analysis of Number Systems and Operations 603
    Place Value
    Addition
    Subtraction
    Multiplication
    Division
    Fractions
    Estimating Answers
    Ratio
    Percentage

Measurement 623

Geometric Measurement 631

Problem Solving 633

FOOD SERVICE MATH

SYNOPSIS

The first level competencies in basic mathematics that are essential for success in food service occupations at the entry level are incorporated along with remediation for skills selected as foundations of all mathematics operations. Four areas are included in the basic mathematics skills:

A. Analysis of Number Systems and Operations

B. Measurement

C. Geometric Measurement

D. Problem Solving

The instructional process of all problem solving should follow this pattern:

First, state the problem;

Second, determine the operation;

Third, estimate the answer; and

Finally, calculate the answer.

Should the calculator be accepted in class? The calculator could easily be used in a commercial kitchen. Once the student has demonstrated the ability to use the mathematic operations, the calculator may be accepted.

Emphasis is on the student's need as related to the occupational world in general and food service in particular.

Second level competencies include managerial related mathematics competencies that are covered in greater detail in Math Workbook Food Service/Lodging, H. W. Crawford, M. C. McDowell. By adapting the Math Workbook, the teacher can enlarge the area of student math competencies.

For further enrichment activities the student is advised to look to business math, bookkeeping, and accounting.

PERFORMANCE COMPETENCIES

The student will demonstrate the use of arithmetic operations on whole numbers, fractions, and decimals to solve given problems.

The student will demonstrate an understanding of exactness of measurement.

The student will measure and convert within the English system.

The student will measure and convert within the metric system.

The student will use addition and subtraction to solve problems with measures of time, weight, and capacity.

The student will be able to find the area and volume of geometric figures.

Given the set of equations and formulas, the student will solve word problems.

The student will solve word problems relating to consumer needs.

The student will solve problems relating to food service.

The student will apply mathematical operations to problems dealing with occupations and future education.

ANALYSIS OF NUMBER SYSTEMS AND OPERATIONS

COMPETENCIES The student will be able to:

identify the place value for each place (digit) of any numeral with up to 9 digits.
find the sum of two numbers.
demonstrate the order principle.
demonstrate grouping principle.
find the difference of two numbers.
solve the problem when given a word problem involving addition and/or subtraction of whole numbers.
multiply two numbers using the distributive property of multiplication over addition.
multiply whole numbers where the factors have 1, 2, or 3 digits.
multiply a 2 or 3 digit number by a multiple of 10.
find the product of two 2-digit numbers when both factors are multiples of 10.
find the missing factor in a multiplication problem.
find the answer when given a one step word problem requiring the operation of multiplication.
write the equation and find the answer when given a word problem requiring multiplication.
write the equation and find the answer when given a two step word problem requiring multiplication and addition or subtraction.
divide a 2 or 3 place number by a 1 or 2 place number.
solve division problems involving 0.
identify the numerator and denominator of a given fraction.
express the proper fraction suggested by a picture.
express equivalent fractions when given a proper fraction.
express a proper fraction in lowest terms.
express the improper fraction suggested by a picture.
add two proper fractions.
add two mixed numbers.
subtract one proper fraction from another.
rewrite an improper fraction as a whole number or as a mixed number.
rewrite a mixed number or a whole number as an improper fraction.
subtract one mixed number from another.
multiply a whole number by a proper fraction.
multiply two proper fractions.

ANALYSIS OF NUMBER SYSTEMS AND OPERATIONS

COMPETENCIES The student will be able to:

multiply two mixed numbers.
find the missing factor when given the product and one factor of a multiplication problem.
divide one fraction by another fraction.
identify the place value for any given digit of a decimal fraction.
express a decimal fraction as a mixed number or as a common fraction with a denominator of 10, 100, or 1000.
express a fraction or a mixed number as a decimal fraction.
add decimal numbers.
subtract one decimal number from another decimal number.
multiply a 1, 2, or 3 place decimal fraction by another 1, 2, or 3 place decimal fraction.
divide a decimal fraction by a whole number or by another decimal fraction.
show your understanding of estimating answers to problems.
solve problems in ratio.
solve problems in percentage.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
Show that you can use arithmetic operations on whole numbers, fractions, and decimals to solve given problems PLACE VALUE	Identify the place value for each place (digit) of any numeral with up to 9 digits	1. Identify the place value for each place (digit) of any numeral with up to 9 digits. 1a. Recognize the numeral applied to a given set of objects up to 1000. 1b. Recognize the number of tens and number of ones in a given two digit (3, 4, 5 digit) numeral. 1c. Tell the value of each digit in a four digit number.	Math Workbook Food Service/ Lodging H. W. Crawford M. C. McDowell 1. pp. 24, 27	

ANALYSIS OF NUMBER SYSTEMS AND OPERATIONS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
ADDITION	Find the sum of two numbers	2. Find the sum of two numbers. 2a. Show that you can add 4 digit numbers. 2b. Find the sum of four addends with up to 4 digits each. 2c. Write an equation for a word problem involving addition and find the answer. 2d. Add numbers with 3 or more digits. 2e. Find the missing addend in an incomplete addition sentence.	2. pp. 26, 27, 28	
	Demonstrate the order principle	3. Demonstrate that two numbers may be added in either order without changing the sum (order principle).		
	Demonstrate the grouping principle	4. Demonstrate that when three or more numbers are added, they may be grouped in any way without changing the sum (grouping principle).		
SUBTRACTION	Find the difference of two numbers	5. Find the difference of two numbers. 5a. Find the difference between two numbers, neither of which has more than 4 digits. 5b. Write an equation for a word problem involving subtraction, and find the answer (problem solving).	pp. 37, 38	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		5c. Subtract numbers with 3 or more digits.		
	Solve the problem when given a word problem involving addition and/or subtraction of whole numbers	6. Given a word problem involving addition and/or subtraction of whole numbers, write an equation for the problem and solve the equation.		
MULTIPLICATION	Multiply two numbers using the distributive property of multiplication over addition	7. Multiply two numbers using the distributive property of multiplication over addition. 7a. Show that you can solve multiplication problems with at least 2 digit multipliers. 7b. Identify the factors and the product in a multiplication problem. 7c. Find the product of two or three 1-digit numbers.	7. p. 28	
	Multiply whole numbers where the factors have 1, 2, or 3 digits	8. Multiply whole numbers where the factors have 1, 2, or 3 digits. 8a. Find the product of a 1 digit number and a 2, 3, or 4 digit number. 8b. Find the product of two 2-digit numbers.	8. pp. 30, 31, 32	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		8c. Find the product of two numbers, each number having 2 or more digits. 8d. Find the product of a 2 digit number and a 3 or 4 digit number. 8e. Multiply any 3 digit number by a 2 digit number. 8f. Solve word problems involving multiplication of a 3 digit number by a 2 digit number.		
	Multiply a 2 or 3 digit number by a multiple of 10	9. Multiply a 2 or 3 digit number by a multiple of 10. 9a. Multiply 1, 2, and 3 digit numbers by 10, by 100, and by 1000. 9b. Multiply a 2 digit number by a 2 digit multiple of 10. 9c. Multiply a 3 digit number by a 2 digit multiple of 10.	9. pp. 32, 33	
	Find the product of two 2-digit numbers when both factors are multiples of 10	10. Find the product of two 2-digit numbers when both factors are multiples of 10.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Find the missing factor in a multiplication problem	11. Find the missing factor in a multiplication problem.		
	Find the answer when given a one step word problem requiring the operation of multiplication	12. Given a one step word problem requiring the operation of multiplication, write the equation and find the answer, using a 1 digit multiplier only.		
	Write the equation and find the answer when given a word problem requiring multiplication	13. Given a word problem requiring multiplication, write the equation and find the answer.		
	Write the equation and find the answer when given a two step word problem requiring multiplication and addition or subtraction	14. Given a two step word problem requiring multiplication and addition or subtraction, write the equation and find the answer.		

ANALYSIS OF NUMBER SYSTEMS AND OPERATIONS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
DIVISION	Divide a 2 or 3 place number by a 1 or 2 place number	15. Divide a 2 or 3 place number by a 1 or 2 place number.	15. pp. 41, 42, 43	
		15a. Identify the divisor, dividend, quotient, and remainder in a division problem.		
		15b. Show that you can solve division problems with at least 2 digit divisors.	15b. pp. 40	
		15c. Divide any 2 or 3 digit numbers by any 2 digit multiple of 10.		
		15d. Divide any 2 or 3 digit number by any 2 digit number.		
		15e. Find the missing factor in a multiplication problem.		
		15f. Divide a 1, 2, 3, or 4 digit number by a 1 digit number.		
		15g. Given a 2 or 3 digit dividend and a 2 digit divisor, find the quotient and remainder if any.		
		15h. Given a 4 or 5 digit dividend and a 2 digit divisor, find the quotient and remainder if any.	15h. p. 41	
		15i. Find the quotient for a division problem with a 2 or 3 digit divisor.		
		15j. Given a word problem requiring the operation of division, write the equation and find the solution.	15j. p. 43	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		15k. Given a two step word problem involving whole numbers, write the equation and find the solution.		
	Solve division problems involving 0	16. Solve division problems involving 0.		
FRACTIONS	Identify the numerator and denominator of a given fraction	17. Identify the numerator and denominator of a given fraction. 17a. Tell what the parts of a fraction symbol represent. 17b. Write the fraction symbol for a given part of a whole. 17c. Recognize that a given fraction is the same as a given picture of the fraction. 17d. Given a picture or diagram that is shaded to show a simple fraction, recognize the fraction shown. 17e. Find the value of a specified fractional part of a set or a whole number. 17f. Recognize the numerator and the denominator in a given fraction.	17. p. 44	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Express the proper fraction suggested by a picture	18. Express the proper fraction suggested by a picture.		
	Express equivalent fractions when given a proper fraction	19. Given a proper fraction, express equivalent fractions. 19a. Given a picture that shows a fraction and its fraction symbol, demonstrate your knowledge of fractions by dividing the picture into smaller equal parts and writing the new symbol. 19b. Given a line segment divided into equal parts and a fraction symbol that names a section of the segment, demonstrate your knowledge of fractions by dividing the line segment into smaller equal parts and writing the new symbol. 19c. Write a set of at least three fractions that are equal to each other by multiplying the top and bottom of a given fraction by the same number. 19d. Find a fraction in lower terms equal to a given fraction by dividing the top and bottom of the fraction by the same number.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		19e. Given a simple fraction, recognize several equivalent fractions.		
	Express a proper fraction in lowest terms	20. Express a proper fraction in lowest terms. 20a. Given a fraction, recognize whether the fraction is in lowest terms. If not, express the fraction in lowest terms. 20b. Given two or three fractions with unlike denominators, find the lowest common denominator. Express the fractions using this denominator. 20c. Express given fractions in lowest terms. 20d. Find the least common multiple (LCM) of two or three numbers.	20. pp. 47, 48, 49	
	Express the improper fraction suggested by a picture	21. Express the improper fraction suggested by a picture. 21a. Write an improper fraction for a given picture that shows a fraction greater than 1. 21b. Express a given improper fraction as a whole number and a fraction. 21c. Given a picture or diagram that is shaded to show a mixed number, recognize the mixed number shown by the shading.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		21d. Given an improper fraction, express the fraction as a mixed number. Given a mixed number, express the number as an improper fraction. 21e. Given an improper fraction, express the fraction as a mixed number, the fractional part of which is in lowest terms.		
	Add two proper fractions	22. Add two proper fractions. 22a. Find the sum of two or more proper fractions with like denominators. 22b. Add two or three like fractions and express the sum in lowest terms. 22c. Find the sum of two or three mixed numbers with like denominators and express the answer in lowest terms. 22d. Given two proper fractions with like denominators, find the difference. 22e. Add unlike fractions and express the sum in lowest terms.	22. pp. 44, 46	
	Add two mixed numbers	23. Add two mixed numbers. 23a. Find the sum of a whole number and a fraction, or a whole number and a mixed number.	23. p. 50	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		23b. Find the sum of two or three fractions or mixed numbers with unlike denominators and express the answer in lowest terms. 23b. Given a one step word problem requiring addition of fractions, write the equation and find the answer, and express the answer in lowest terms.		
	Subtract one proper fraction from another	24. Subtract one proper fraction from another. 24a. Subtract a fraction from a fraction when regrouping is not necessary and write the difference in lowest terms. 24b. Subtract a fraction from a fraction when regrouping may be necessary and write the difference in lowest terms. 24c. Subtract a fraction or mixed number from a whole number and write the answer in lowest terms.	24. p. 48	
	Rewrite an improper fraction as a whole number or as a mixed number	25. Rewrite an improper fraction as a whole number or as a mixed number. 25a. Find the difference of two mixed numbers with like denominators and write the answer in lowest terms.	25. p. 50	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Rewrite a mixed number or a whole number as an improper fraction	26. Rewrite a mixed number or a whole number as an improper fraction.	26. p. 50	
	Subtract one mixed number from another	27. Subtract one mixed number from another. 27a. Subtract unlike fractions and express the difference in lowest terms. 27b. Given two fractions, two mixed numbers, or a mixed number and a fraction with unlike denominators, find the difference and express the answer in lowest terms. 27c. Given a one step word problem requiring subtraction of fractions, write the equation and express the answer in lowest terms (problem solving). 27d. Given a two step word problem involving addition and/or subtraction of fractions, write the equation and express the answer in lowest terms.	27. p. 50	
	Multiply a whole number by a proper fraction	28. Multiply a whole number by a proper fraction.	28. p. 57	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Multiply two proper fractions	29. Multiply two proper fractions.	29. pp. 46, 56, 57	
	Multiply two mixed numbers	30. Multiply two mixed numbers. 30a. Multiply fractions or mixed fractions by a whole number and express the answer in lowest terms. 30b. Multiply a fraction by a fraction, a fraction by a mixed number, or a mixed fraction by a mixed number, and express the answer in lowest terms.	30. pp. 49, 57, 58	
	Find the missing factor when given the product and one factor of a multiplication problem	31. Given the product and one factor of a multiplication problem, find the missing factor.		
	Divide one fraction by another fraction	32. Divide one fraction by another fraction. 32a. Divide a whole number by a fraction or a mixed number. Divide a fraction or a mixed fraction by a whole number. 32b. Divide a fraction by a fraction or a mixed fraction. Divide a mixed fraction by a mixed fraction.	32. pp. 30, 58, 59	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		32c. Solve division of fraction problems using multiplicative inverses.		
	Identify the place value for any given digit of a decimal fraction	33. Identify the place value for any given digit of a decimal fraction. 33a. Recognize the place value of each digit in a decimal through thousandths. 33b. Given any decimal through thousandths, express the decimal in word form. 33c. Given a decimal through thousandths expressed in word form, express the decimal in numerical form. 33d. Write any given decimal through hundred thousandths in word form and in numerical form.	33. p. 51	
	Express a decimal fraction as a mixed number or as a common fraction with a denominator of 10, 100, or 1000	34. Express a decimal fraction as a mixed number or as a common fraction with a denominator of 10, 100, or 1000. 34a. Express fractions with denominators of 10, 100, or 1000 as decimals. 34b. Given fractions with denominators that can be expressed as powers of 10 (through 100,000) express the fraction as decimals.	34. p. 51	

ANALYSIS OF NUMBER SYSTEMS AND OPERATIONS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Express a fraction or a mixed number as a decimal fraction	35. Express a fraction or a mixed number as a decimal fraction.	35. pp. 51, 53, 54	
	Add decimal numbers	36. Add decimal numbers. 36a. Express a given decimal to the nearest whole number, tenth, hundredth, or thousandth. 36b. Find the sum of five or fewer decimals. 36c. Add decimals through hundred thousandths.	36. p. 52	
	Subtract one decimal number from another decimal number	37. Subtract one decimal number from another decimal number. 37a. Find the difference of two decimals. 37b. Subtract decimals through hundred thousandths. 37c. Solve word problems involving addition and/or subtraction of decimals.	37. p. 52	

ANALYSIS OF NUMBER SYSTEMS AND OPERATIONS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Multiply a 1, 2, or 3 place decimal fraction by another 1, 2, or 3 place decimal fraction	38. Multiply a 1, 2, or 3 place decimal fraction by another 1, 2, or 3 place decimal fraction. 38a. Multiply decimals when one of the factors is a whole number. 38b. Multiply decimals when both factors are decimals.	38. p. 52	
	Divide a decimal fraction by a whole number or by another decimal fraction	39. Divide a decimal fraction by a whole number or by another decimal fraction. 39a. Divide a decimal by a whole number. 39b. Divide a decimal by a decimal. 39c. Divide a whole number by a decimal. 39d. Divide whole numbers when the divisor is a larger number than the dividend. 39e. Solve word problems that require division of a decimal by a whole number.	39. pp. 53, 54	
ESTIMATING ANSWERS	Show your understanding of estimating answers to problems	40. Show your understanding of estimating answers to problems. 40a. Given a numeral less than 1,000,000, express the numeral to the nearest ten, hundred, or thousand.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		40b. Estimate the answer to an addition or subtraction problem by rounding the addends or subtrahend and minuend to the nearest ten, hundred, or thousand. 40c. Round off a given number to a given place. 40d. Given a 2 digit divisor, express the divisor to the nearer multiple of 10. Use the divisor to estimate a quotient.		
RATIO	Solve problems in ratio	41. Solve problems in ratio. 41a. Write a ratio to express a comparison of two quantities. 41b. Given a ratio, write several equivalent ratios. 41c. Solve word problems that require the use of ratio and proportion.	41. pp. 63, 64	
PERCENTAGE	Solve problems in percentage	42. Solve problems in percentage. 42a. Express fractions whose denominators are factors of 100 as fractions with denominators of 100, as decimals, and as percents. Express whole number percents as decimals and as fractions in lowest terms.	42. pp. 65, 66, 67, 120	

ANALYSIS OF NUMBER SYSTEMS AND OPERATIONS

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		42b. Find the amount when the percent and the numbers are known. 42c. Find the percent when the number and the amount are known. 42d. Express fractional percents as proper fractions. 42e. Find the number when the percent and the amount are known. 42f. Express any ratio as a percent and express any percent as a ratio in lowest terms. 42g. Solve given word problems involving ratio and percent. 42h. Solve any given proportion for its missing term. 42i. Solve word problems involving percent using proportions.		
		NOTE TO TEACHER: For further information on behavioral objectives for mathematics see Objectives for Secondary Math, 1974, Ralph J. Heimer, H. J. Bailey, J. L. Trudex		

1055

1056

MEASUREMENT

COMPETENCIES The student will be able to:

demonstrate an ability to use coin values.
demonstrate the use of linear measurement.
demonstrate the ability to tell time.
demonstrate an understanding of temperature readings.
demonstrate an understanding of weight and liquid measures.
demonstrate the ability to convert within the system.
demonstrate the ability to use addition and subtraction with measures of time, weight, and capacity.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To be successful in food service, one must have an understanding of exactness of measurement.	Demonstrate an ability to use coin values	1. Show that you can use coin values. 1a. Identify a penny, a nickel, and a dime, and tell the value of each. 1b. Find the value of a given group of pennies, nickels, and dimes that totals less than $1.00. 1c. Make change from $1.00 for any amount up to $.99. 1d. Select combinations of coins for any value up to $1.00.	Math Workbook Food Service/ Lodging H. W. Crawford M. C. McDowell 1. p. 39	
	Demonstrate the use of linear measurement	2. Given a ruler with sixteen divisions to the inch, measure a given line segment to the nearest eighth of an inch. 2a. Identify inch, foot, yard, and mile. 2b. Measure a given object or line segment to the closest inch.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		2c. Use a ruler to measure objects to the nearest quarter inch. 3. Using English units, make linear measurements to a given level of accuracy and record your measures in simplest terms. 4. Given a ruler with centimeter and millimeter scales, measure given distances to the nearest millimeter. 4a. Identify millimeter, centimeter, decimeter, meter, and kilometer. 4b. Measure a given object or line segment to the closest millimeter.		
	Demonstrate the ability to tell time	5. Show that you can apply understanding of time to the minute. 5a. Recognize the hour and/or half hour as given on a clockface. 5b. Demonstrate the telling of time by setting the hands of a clock to a given hour, half hour, and quarter hour. 5c. Recognize the written time (hour, half hour, quarter hour and five minutes) represented on a given clockface.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		5d. Express time to the nearest minute, using the colon. Use A.M. for morning and P.M. for afternoon in telling time.		
	Demonstrate an understanding of temperature readings	6. Record temperature readings to the nearest degree using the Fahrenheit scale. 6a. Record the temperature shown on a Fahrenheit thermometer. 6b. Find the difference between two given temperatures. (F.°)		
		7. Record temperature readings to the nearest degree using the Centigrade scale. 7a. Record the temperature shown on a Centigrade thermometer. 7b. Find the difference between two given temperatures. (C.°)		
	Demonstrate an understanding of weight and liquid measures	8. Using English units, measure weight to a given level of accuracy and record your measures in simplest terms. 8a. Identify measures used for weight (ounce, pound, ton).		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		9. Using English units, make liquid measurements to a given level of accuracy and record your measures in simplest terms. 9a. Identify measures used for liquid (ounce, pint, quart, gallon). 9b. Identify measures used in cooking (teaspoon, tablespoon, cup). 10. Using Metric units, measure weight to a given level of accuracy and record your measures in simplest terms. 10a. Identify measures used for weight (milligrams, centigrams, decigram, gram, decagram, hectogram, kilogram, myriagrams, quintal, and metric ton). 11. Using Metric units, make liquid measurements to a given level of accuracy and record your measures in simplest terms. 11a. Identify measures used for liquid (milliliter, centiliter, deciliter, liter, decaliter, hectoliter, and kiloliter. 11b. Identify measures used for cooking (milliliter, centiliter, liter, milligrams, centigrams, grams, and decagrams).		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		12. Explain why measurements are not completely accurate and what is meant by standard units of measure.		
	Demonstrate the ability to convert within the system	13. Using a table of liquid measures, express cups as pints, cups as quarts, quarts as gallons, pints as quarts, fluid ounces as cups, and fluid ounces as pints, and vice versa.	10, p. 204	
		14. Using a table of weight measures, express ounces as pounds and pounds as tons, and vice versa.		
		15. Express linear measures of inches as feet, inches as yards, feet as yards, and feet as miles, and vice versa.		
		16. Using a table of metric measures, express linear measures of millimeters as centimeters, centimeters as decimeters, decimeters as meters, centimeters as meters, and meters as kilometers, and vice versa.		
		17. Using a table of metric weight measures, express milligrams as centigrams, centigrams as grams, grams as kilograms, and vice versa.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		18. Using a table of metric volume measures, express milliliters as centiliters, centiliters as liters, liters as kiloliters, and vice versa. 19. Express time given on a 24-hour basis as time on a 12-hour basis, and vice versa. 20. Given a table of linear measures including kilometer, hectometer, decameter, meter, decimeter, centimeter, and millimeter, express a given measure as any of the other measures (e.g., millimeters as hectometers). 21. Given a table of metric units of mass (or weight), convert an amount in one unit to an amount in any of the other units.		
		NOTE TO THE TEACHER: For additional activities to introduce the metric system see Metrics--A Resource Guide for Home Economics prepared by Dr. Ruth Anderson and available through Home Economics Education, Pennsylvania Department of Education.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		See Also: HELPS ("Home Economics Learning Packages") "Let's Think Metric" available through the American Home Economics Association.		
	Demonstrate the ability to use addition and subtraction with measures of time, weight, and capacity	22. Add or subtract liquid measures (fluid ounces, cups, pints, quarts, and gallons), expressing answers in simplest form. 23. Find the sum of three like linear English measures, expressing the answers in simplest form. 24. Add or subtract measures of time (centuries, years, weeks, days, hours, minutes, and seconds), expressing answers in simplest form. 25. Add or subtract measures of weight (ounces, pounds, and tons), expressing answers in simplest form.		

GEOMETRIC MEASUREMENT

COMPETENCIES The student will be able to:
recognize geometric figures.
demonstrate an understanding of geometric figures by finding their areas.
demonstrate an understanding of geometric figures by finding their volume.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To be successful in many areas of food service, one must have an understanding of geometric figures, particularly how to calculate their areas and volumes.	Recognize geometric figures	1. Show your understanding of geometric figures and circles by recognizing them when shown models of the various figures.		
	Demonstrate an understanding of geometric figures by finding their areas	2. Given a rectangle or square on a grid, measure the area by counting squares. 3. Find the area of a rectangular region when given the lengths of the sides. 4. Identify the following parts of a given circle: (1) center, (2) radius, (3) diameter, and (4) chord. 5. Given the radius or the diameter of a circle, construct the circle. 6. Given the measures of the height and the radius of the base of a cylinder, find the volume of the cylinder.		

GEOMETRIC MEASUREMENT

Key Concept	Competency	Suggested Activities	Resources	Evaluation
	Demonstrate an understanding of geometric figures by finding their volume	7. Given the formula for finding the area of a circle and the measure of the radius or of the diameter of the circle, find its area. 8. Measure volume directly. 9. Find the volume of a cube when given the length of one edge. 10. Find the volume of a circular cylinder using the formula V = bh.		

PROBLEM SOLVING

COMPETENCIES The student will be able to:
write and solve equations for word problems.
solve word problems relating to consumer needs.
solve word problems relating to food service.
apply mathematical operations to problems dealing with occupations and future education.

Key Concept	Competency	Suggested Activities	Resources	Evaluation
To be successful one must be able to apply mathematical operations to problems dealing with occupational life in general and food service in particular.		NOTE TO TEACHER: The instructional process of all problem solving should follow this pattern: First, state the problem; Second, determine the operation; Third, estimate the answer; Fourth, calculate the answer.	Math Workbook Food Service/ Lodging H. W. Crawford M. C. McDowell	
	Write and solve equations for word problems	1. Write an equation for a word problem involving addition and find the answer. 2. Write an equation for a word problem involving subtraction and find the answer. 3. Given a word problem requiring multiplication, write the equation and find the answer.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		4. Given a word problem requiring the operation of division, write the equation and find the solution. 5. Given a two step word problem involving whole numbers, write the equation and find the solution. 6. Given a word problem involving addition and/or subtraction of whole numbers, write an equation for the problem and solve the equation. 7. Given a word problem involving multiplication of whole numbers, write an equation for the problem and solve the equation. 8. Given a word problem involving division of whole numbers, write an equation for the problem and solve the equation. 9. Given a two step word problem involving addition and/or subtraction of fractions, write the equation and find the answer in lowest terms.		

PROBLEM SOLVING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		23. Given the total bill and the amount of money paid to the cashier, determine the number and variety of bills and/or coins to be given in change.		
		24. Given the appropriate table of fares, determine the cost of traveling by plane, bus, ship, or train between any two cities.		
		25. Using a given map or chart, determine the distance between two given cities.		
		26. Given a table of annual premiums for bodily injury, property damage, comprehensive damage, and collision insurance for different types of driving, determine the total annual premium for a car used for pleasure, for driving to work, or for business.		
	Solve word problems relating to food service	27. Given a recipe for n people, determine the amount of ingredients for <n people.	27. pp. 126, 127, 128, 129	
		28. Given a recipe for n people, determine the amount of ingredients for >n people.	28, p. 127	

PROBLEM SOLVING

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		29. Given a recipe that serves n people and the cost of a given amount of each of the ingredients, determine the cost of serving one person.		
		30. Given a recipe that serves n people and the number of calories in a given amount of each of the ingredients, determine the number of calories in a serving for one person.		
		31. Given a scale drawing of an item to be produced and the materials to be used (a wedding cake, for example), determine the amount of each material needed to produce the item.		
		32. Given the measurements of an item, decrease or increase its measurements n times and determine its new measurements.		
		33. Given an itemized list of the amounts of various materials used in producing a food item and the cost per unit of each material, determine the total cost of the materials necessary to produce the item.	33. pp. 130, 131, 132, 133	

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		34. Given a schedule of rates for electricity and an electric bill (from which the number of kilowatt hours used can be determined), determine the total cost of the electricity used. Compare this bill with the amount shown on the electric bill. 35. Given a schedule of rates for gas and a gas bill (from which the number of cubic feet used can be determined), determine the total cost of the gas used. Compare this cost with the amount shown on the gas bill. 36. Given a schedule of rates for water and a water bill (from which the number of cubic feet used can be determined), determine the total cost of the water used. Compare this cost with the amount shown on the water bill. 37. Given a table of telephone rates, the type and number of calls made in a given month, and the telephone bill for the month (including federal and local taxes), determine whether the total shown on the telephone bill is correct.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		38. Given the annual premium rates of coverage for fire insurance and the amount of coverage, determine the premium for one year.		
		39. Given the original price of a piece of food service equipment, its age, and its trade in or resale value, determine the average annual depreciation of the equipment.		
		40. Given the original cost and the average annual depreciation of a piece of food service equipment, determine the rate of depreciation.	40. pp. 177, 178	
	Apply mathematical operations to problems dealing with occupations and future education	41. Given the number of people in an occupation and the total working population, find the percent of the total working population in the given occupation.		
		42. Given the present population and the expected rate of population increase, predict what the population will be in n years.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		43. Given the percent of people in a given occupation and the predicted total working population in n years, predict the number of people in that occupation in n years. 44. Given the average yearly wage for an occupation and the average years of employment in that occupation, find the average total life income for a person in that occupation. 45. Given the cost of training and the total life income for an occupation, find what percent of life income the cost of training represents. 46. Given an itemized list of further education expenditures--including tuition, room and board, books, travel expenses, and personal expenses--for one month or year, find the cost of attending college for four years. 47. Given the present average cost of attending college for one year and the predicted average rate of increase, predict the annual cost in n years.		

Key Concept	Competency	Suggested Activities	Resources	Evaluation
		48. Given the amount of a scholarship for one year and the total annual cost of further education, find the percent of the total that is paid by the scholarship. 49. Given the total cost for one year of further education, determine how much you would have to save yearly for any given number of years to pay for one year of further education. Do not consider the interest you might earn while saving the money.		

References

Page

Suggestions for Teaching 645
  Involving Students
  Presenting Information
  Using Visual Aids
  Evaluation
  Managing the Classroom

References 651
  General References
  Orientation
  Safety
  Sanitation
  Nutrition
  Receiving, Storing, and Issuing
  Food Service Equipment
  Food Production
  Service
  Food Service Math

1091

SUGGESTIONS FOR TEACHING

The following suggestions will prove useful in adapting the Guide to the classroom:

Involving Students

Whenever possible, students should be encouraged to present class demonstrations.

Assignments for tasks should be specific. If they are of a daily nature, a rotation chart should be utilized to insure that each student has the opportunity to perform all tasks.

Rewarding the students immediately for their successes provides necessary reinforcement. A reward might be as simple as, "That's good work. I'm proud of you."

Variety in activities helps maintain the student's interest level. Alternate activities which involve movement with those which do not. Also alternate group work with individual work.

Tape recording a lab without the student's knowledge gives students the opportunity to evaluate themselves at a later time.

Pictures or slides of students involved in class activities may encourage self-evaluation and serve as a motivating factor. Students often see positive or negative behavior in pictures better than when they actually occur.

A "wishing well" for student wishes or a "druthers" box may be used to provide additional opportunities for communication between students and teacher.

An activity should be repeated if students show an interest in doing so and repetition is justifiable.

Students should be given opportunities to arrange bulletin boards and "dress" display windows using their projects and ideas.

At times, class activities should be integrated with overall school projects.

Special events such as socials, field trips, or special privileges should be planned as class rewards.

A system of rewards should be developed cooperatively with students.

Presenting Information

Lesson plans should provide more than enough activities for the entire class period.

Repetition is a necessary technique; however, the teacher should use a variety of learning experiences to present each concept.

Resource people who can explain procedures in simple terms should be used whenever possible.

Parents will be excellent resource persons for class activities and career familiarization. For example: a parent who is a chef, dietitian, waitress or waiter, food service manager, retail grocer or hotel manager could discuss the career possibilities inherent in the food service industry.

The experience of former students could be utilized through visits from former students or through taped interviews and pictures of students on the job. Hearing and seeing a success story will be a useful motivating technique.

Visits to the training stations of cooperative students provide students with an opportunity to see an actual job setting and to become familiar with the variety of jobs available.

If well planned, field trips can be a motivating tool. The student should be given information or a check sheet on points to observe. Knowing what to expect enables the student to glean the maximum benefit from the experience.

Samples of projects can be prepared in advance for use in teaching how to construct or prepare the item. These are most effective when broken down into steps with a sample for each step.

Handout sheets are more effective if key ideas are illustrated and the information is broken down into simple, meaningful steps.

Short phrases and sentences are more effective for learning materials.

Articles from newspapers, magazines, and pamphlets may be used to present information.

Tapes can be used to present panel discussions, interviews, or other information when resource persons cannot attend class.

Magazine illustrations can effectively inspire discussion.

Mirrors placed around the room provide visual feedback for motivation for grooming and posture.

Using Visual Aids

Students should be encouraged to produce visuals for class. The necessary material should be provided.

Students should be responsible for the set up of audio-visual equipment on a rotation basis. Set aside a time to demonstrate the operation of the audio-visual equipment.

If the exact script is read along with filmstrips, students have a tendency to become bored. Hit the major ideas and dispense with the rest. Pause for student questions during the filmstrip.

Students enjoy hearing their own voices on tape. Make use of tapes during role play, practice interview, etc. Tapes may be saved and played again later to show progress.

Transparencies are particularly helpful in working with the problem reader. Through the use of overlays, material can be easily broken down into segments.

Flash cards are an effective method of reviewing terminology related to equipment and tools.

Flip charts showing step by step procedures are also helpful to the teacher who gives the same directions repeatedly.

Filmstrips are often more effective than films because concepts can be discussed and explained during filmstrips.

Evaluation

Check lists, rating scales, and questionnaires can be used by students for self-evaluation.

When self-evaluation is utilized, a comparison with the teacher's evaluation is beneficial and encourages honesty and objectivity.

The student's attendance during each grading period should be evaluated as a part of pre-employment training.

In grading written assignments, be sure to acknowledge correct answers as well as incorrect answers. Smile and frown symbols indicating correct and incorrect responses may be used to evaluate the students. Use of such symbols may be less negative and more easily understood than other methods of rating.

Managing the Classroom

A student management system should be planned cooperatively with students. Job designations such as supervisor, equipment manager, inspector, and others may be made.

Plan a regular classroom routine but be flexible!

All directions should be stated in simple terms.

Extra activities and projects should be provided for faster students.

Complex laboratory experiences should be broken into simple steps.

Students should have a definite place to keep their personal materials such as paper, pencils, and notebooks.

Specific instructions must be given for using money box.

Parent permission slips for field trips or other outside activities should be used to keep parents informed of such activities.

REFERENCES

General References

Coob, Vicki. Science Experiments You Can Eat. Philadelphia: J. B. Lippincott, 1972.

Hall, Olive A. and Beatrice Paolucci. Teaching Home Economics. New York: John Wiley and Sons, 1969.

Moore, Opal. Why Johnny Can't Learn. Milford, Mich.: Mott Media, 1975.

Popham, W. James and Eva L. Baker. Classroom Instructional Tactics. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.

Tannahill, Rhea. Food in History. Briarcliff Manor, N.Y.: Stein and Day, 1973.

"FHA Action Pac: Guidelines for Program Development." Allegheny Intermediate Unit, Suite 1300, Two Allegheny Center, Pittsburgh, Pa. 15212, 1976.

CAREER World; The Continuing Guide to Careers. Published monthly September through May. Curriculum Innovations, Inc., Highwood, Illinois 60040.

Orientation

Rettig, Jack. Careers: Exploration and Decision. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1974.

Worksheets:

"Comparing Job Opportunities in Food Service," "Fact Finding About Food Service," and "Completing a Job Application." From "Food Preparation: For Home, For Foodservice." Instructional packet by Proctor and Gamble Company, P.O. Box 14009, Cincinnati, Ohio 45214.

"There's A Job in Your Future." Home Economics Learning Packages (HELPs), American Home Economics Association, 2010 Massachusetts Ave., N.W., Washington, D.C. 20036.

Filmstrips:

"The People Profession: Careers in Home Economics," catalog # 101 863; and "Jobs for You: It's Happening in Home Economics," catalog # 102 028. Both from Guidance Associates, 757 Third Avenue, New York, New York 10017.

Safety

Blake, Roland P. Industrial Safety. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.

"Health and Safety Guide for Eating and Drinking Places." DHEW Publication No. (NIOSH) 76-163, 1976. "Health and Safety Guide for Retail Bakeries." DHEW Publication No. (NIOSH) 75-135, 1975. Both from U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, Division of Technical Services, Cincinnati, Ohio.

Federal Register, Vol. 39, Number 125. Department of Labor, Occupational Safety and Health Standards.

Sanitation

Eshback, Charles E. Bacterial Food Poisoning. Food Management Leaflet #1. Amherst, Mass.: University of Massachusetts, College of Agriculture, Cooperative Extension Service, 1962.

Kelly, Harold. Applied Food Service Sanitation. National Institute for the Food Service Industry, 1974.

Food Service Sanitation Manual. Public Health Service Publication No. 934. Washington, D.C.: Government Printing Office, 1963.

National Sanitation Foundation Standards on Equipment. National Sanitation Foundation, Ann Arbor, Michigan.

Nutrition

Alfin-Slater, R. and L. Aftergood. Nutrition for Today. Dubuque, Iowa: William C. Brown Co., 1973.

Ashley, R. and H. Dussal. Dictionary of Nutrition. New York: St. Martin's Press, 1975.

Bowes and Church. Food Values of Portions Commonly Used. Philadelphia, Pa.: J. B. Lippincott Co., 12th Ed., 1975.

Carey, R. L., I. B. Vymeister, and J. S. Hudson. Common Sense Nutrition. Omaha, Nebraska: Pacific Press Publishing Association, 1971.

Cyrs, Thomas E. You, Behavioral Objectives and Nutrition. Rosemont, Illinois: National Dairy Council, 1975.

Deutsch, R. M. The Family Guide to Better Food and Better Health. New York: Bantam Books, Inc., 1973.

Deutsch, R. M. Realities of Nutrition. Palo Alto, California: Bull Publishing Co., 1976.

Ferguson, J. M. Habits not Diets. Palo Alto, California: Bull Publishing Co., 1976.

Gifft, H. H., M. B. Washbon, and G. G. Harison. Nutrition Behavior and Change. Englewood Cliffs, N.J.: Prentice Hall, Inc., 1972.

Guthrie, H. A. Introductory Nutrition. St. Louis, Mo.: The C. V. Mosby Co., 1975.

Labuza, T. P. The Nutrition Crisis. New York: West Publishing Co., 1975.

Lappe, F. M. *Diet for a Small Planet*. New York: Ballantine Books, Inc., 1971.

Mahoney, M. and C. Thorenson. *Self Control: Power to the Person*. California: Brooks/Cole Publishing Company, 1974.

Mayer, Jean. *Overweight: Causes, Cost, and Control*. New Jersey: Prentice-Hall, Inc., 1968.

Stuart, R. B. and B. Davis. *Slim Chance in a Fat World*. Champaign, Illinois: Research Press, 1972.

Stunkard, A. *The Pain of Obesity*. Palo Alto, California: Bull Publishing Co., 1976.

White, P. L. *Let's Talk About Food*. Action, Mass.: Publishing Sciences Group, Inc., 1974.

"Be Good to Your Baby Before It Is Born." The National Foundation of the March of Dimes, P.O. Box 2000, White Plains, N.Y. 10602.

"Food Science for Teen Leaders--4-H." The Pennsylvania State University, College of Agriculture, Extension Service, University Park, Pa.

"Great Expectations." (film) Society for Nutrition Education, 2140 Shattuck Ave., Suite 1110, Berkeley, California.

Worksheets:

"Facts About Food," "Knowing About Nutrients," and "What Foods Do You Like and Why?" From "Food Preparation: For Home, For Food Service." Proctor and Gamble Company, P.O. Box 14009 Cincinnati, Ohio 45214.

Nutrition Education Materials Index. Order from: Office of Education, The Nutrition Foundation, 888 Seventeenth St., N.W., Washington, D.C. 20006.

Recommended Dietary Allowances. National Academy of Sciences. Washington, D.C.: Printing and Publishing Office, National Academy of Sciences, 8th ed., 1974.

School Lunch Journal. P.O. Box 10095, Denver, Colorado.

Teens Entertain--A 4-H Food-Nutrition Project Members Manual." Extension Service, U.S. Department of Agriculture.

Receiving, Storing, and Issuing

Kotechevar, Lendal. Quantity Food Purchasing. New York: John Wiley and Sons, 1961.

Buying, Handling, and Using Fresh Fruits and Vegetables. Blue Goose Inc. Los Angeles, California: American Fruit Growers, Inc.

Meat Buyers Guide to Standardized Meat Cuts. National Association of Hotel and Restaurant Meat Purveyors, 100 W. Monroe St., Chicago, Illinois 60603.

Food Service Equipment

Clawson, Auguste. Equipment Maintenance Manual. New York: Ahrens Publishing Co.

Kotschevar, Lendal H. and Margaret E. Terrell. Food Service Layout and Equipment Planning. New York: John Wiley and Sons, 1961.

Care of Food Service Equipment. American Dietetic Association, Minneapolis, Minn.: Burgess Publishing Company.

"Cleaning a Food Slicer." Manhattan, Kansas: Kansas State University, 1967. 52 slides. Order from: Institutional Management Department.

Worksheets:

"Do's and Don'ts for Deep Frying," "How Would You Rate Your Fried Foods?" "Compare Frying Methods," and "Keeping Equipment Clean and in Good Condition." From "Food Preparation: For Home, For Foodservice." Proctor and Gamble Company, P.O. Box 14009, Cincinnati, Ohio 45214.

"We Do It Better With Steam." (film, 16 mm, color, 16 min.) The Cleveland Range Company, 1333 East 179th St., Cleveland, Ohio 44110.

Food Production

Brodner, Carlson and Maschal. *Profitable Food and Beverage Operation*. New York: Ahrens Publishing Company.

Folsom, LeRoi A. (Editor) *The Professional Chef*. 4th Edition. The Culinary Institute of America. Boston, Mass.: Cahners Books, 1974.

Fowler and West. *Food for Fifty*. (2nd printing) New York: John Wiley and Sons, 1960.

Haines, Robert G. *Food Preparation for Hotels, Restaurants, and Cafeterias*. Chicago: American Technical Society, 1973.

Kotshchevar, Lendal H. *Quantity Food Production*. Berkeley, California: McCutchan Publishing Company, 1966.

Mart, Constance. *Recipes at Moderate Cost for School, Institution and Commercial Food Service*. New York: Appleton-Century-Crofts, Inc., 2nd edition, 1942.

Ray, Mary Frey and Evelyn Jones Lewis. *Exploring Professional Cooking*. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1976.
Also Available: *Exploring Professional Cooking--Student Activity Guide* and *Teacher's Guide*.

Sullivan, Lenore. *Quantity Cookery Recipe File*. Ames, Iowa: Collegiate Press, 5th edition, 1955.

Sultan, William. *Practical Baking*. Westport, Conn.: The AVI Publishing Company, 1969.

Treat, Nola and Lenore Richards. Quantity Cookery. Boston, Mass.: Little, Brown, and Company (Revised edition), 1951.

Wenzel, George L., Sr. Wenzel's Menu Maker. The Steck Company, U.S.A., 1964.

Handbook of Food Preparation. Washington, D.C.: The American Home Economics Association, 1975.

Service

Solomon, Ed. Service is an Honorable Profession. McGarvey's Boat Drive-in Restaurant, 1971. Address: c/o Ed Solomon, Vermillion, Ohio.

Harris, Ellen Adeline. Professional Restaurant Service. Toronto, Canada: McGraw-Hill Company of Canada, 1968.

McLarland, Marilyn K. Hospitality and Food Service. 1974. Address: Home Economics Department, 230 E 9th Street, Cincinnati, Ohio 45202.

The Essentials of Good Table Service. Ithaca, N.Y.: The Cornell Hotel and Restaurant Administration, Cornell University, 2nd edition, 1968.

"Planning, Selecting, Serving, and Eating Food." (Transparency series) 1964. Minnesota Mining and Manufacturing Company, Medical Film Library, 2501 Hudson Road, St. Paul, Minn. 55119.

The Smart Waitress. (Filmstrip) National Restaurant Association, 1530 North Lake Shore Drive, Chicago, Ill. 60610.

Food Service Math

Crawford, H. W. and M. C. McDowell. Math Workbook--Food Service--Lodging. Boston, Mass.: Cahners Books, 1971.

Metrics: A Resource Guide for Home Economics. Bureau of Vocational, Technical and Continuing Education. Harrisburg, Pa.: Pennsylvania Department of Education, 1975.

"Let's Think Metric." (HELPs) American Home Economics Association, 2010 Massachusetts Ave., N.W., Washington, D.C. 20036.